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Vocabulary of the Ho language.—By Lieut. TICKELL.

GOD, SING BONGA, OR MARANG BONGA.

Persons, Distinctions, &c.

a man, ho <i>or</i> horo,	girl, kőoe,
woman, èra,	lord <i>or</i> master, gőmké,
father, appoo,	servant, chittratannee,
mother, enga,	fostered servant } without wages, } dassee,
son, koáhōn,	hired labourer, nallatannee,
daughter, koōihōn,	beggar, koitannee,
nephew, hōntédèt,	thief, komboo,
brother (elder,) baó,	diviner, oja <i>or</i> soka, (<i>Ooria</i>),
brother (younger,) oonditté,	priest, déoree, (<i>Ooria</i>),
brothers, oondi boko,	witch <i>or</i> wizard, najumtannee,
sister, missee, (?)	a Lurka Kole, Ho,
husband, herel <i>or</i> hám,	a Nagpoor Kole, Orang,
wife, èra,	a Bhoomij, Mootkan,
old man, hám	a bramin, bamee,
old woman, booree,	foreigners in general, dickoo,
adult woman, ballé hapanoom,	blacksmith, kamar,
adult youth, ballé sepèd,	potter, koonkal,
middle aged man, gandee bar,	gwalle (drover,) gow, (<i>Ooria</i>),
boy, koá,	

weaver, piaï *or* mâlee,
work, pỹtee,
name, notoom *or* noomoo,

name-sake *or* friend, sákee,
business (affair,) kajee,

Edibles, &c.

boiled rice, mandee,
dinner (eatables) doondoo,
meat, jeeloo,
egg, petto *or* billee,
salt, booloong,
ghee, gōtōm,

oil, soonoom,
water, dah,
spirits, arkee,
rice-beer, eelee,
milk, toá,

Features of Country, Elements, &c.

fire, sengel,
water, dah,
earth, oté *or* hassa,
air, hoio,
rain, gamma dah,
thunder, reemeed saree,
lightning, hicheer,
hail, harril,
frost, rattan dah,
dew, saparoom,
clouds, reemeed,
wind, hoio,
the sun, singee,
moon, chandoo,
a star, eepil,
a forest, beer,
a grove, tota,
a sacred grove, saér,
a mountain, booroo,
a small hill, gootoo,
lofty *or* huge rock, hootoop,
a flat rock *or* slab, sereng,
a stone, dirree,
a valley, kocha,

a ravine, hoóang,
a scrub jungle, patta,
a grass jungle, doomboo,
a cave, oondoo,
a plain, pee,
a river, garra,
a rivulet, lore,
a spring, seteng sood,
a well, chooa *or* sood,
a water-fall, dooltan dah,
sand, geetil,
clay, hassa,
soil, oté,
mud, lossod,
a deep pool, ikĩr,
a road, horá,
a village, hattoo,
a temporary dwelling } bassa,
in the woods, }
a house, oá,
a sleeping house, mandee oá,
a farm house in }
the fields, } oosám oá,
a hut to watch crops, gooyoo,

a granary, kōlōm,
cattle pound, gōt, (*Ooria*),

byre or cow house, gow oá
a ricefield, koondee,

Time.

a year, sirma,
last year, má,
this year, missad,
next year, kalom,
year after next, tèr kalom,
some years ago, má mán,
a month, chandoo,
a day, má,
daylight, singee,
day by day, dimsee,
sunshine, jété,
yesterday, holá,
day before yesterday, holatèr,
to-morrow, gappa,
day after to-morrow, miang,
two days after to-morrow, indree,
three days after to-morrow, tèrtree, the other day, hola mán

to-day, tising,
last night, enang needa
night, needa
dark, nooba or hendé
light, marsal
morning, settá
very early, eedang bo
cock crow, seemko rar
evening, aioob
midday, tikin
afternoon, tara singee
midnight, talaneeda
one day, moosing
two days, barsing
three days &c., appé má &c.,
now-a-days, nimīr

Numeration.

one, miad,
two, barria,
three, appia
four, oopoonia,
five, moya,
six, toorooia,
seven, áya,
eight, eerilia,
nine, arreá,
ten, gèl,
eleven, gelmiad,
twelve, gelbarria &c.,

twenty, hissee,
twenty-one, hissee miad &c.
thirty, doseé,
thirty-one, doseé miad &c.
forty, barhissee,
fifty, barhisseegeèl
sixty, appéhissee,
seventy, appéhisseegeèl,
eighty, oopoonhissee,
ninety, oopoonhisseegeèl,
one hundred, mee sow,
two hundred, bar sow &c.

half, talla,
whole, jaké,

half a maund, bissea,
a seer (measure), pattee,

rupee, taka,	pice, dibia,
eight anna piece, adelee,	a coss, gowdee,
four anna piece, sikkee,	a cubit, mooka,

Miscellanea, Tools, &c.

cloth, lijia,	lota, mootā,
string, b̄yre,	basket, dalán,
a fowra (shovel), koollam,	small basket, tōnkee,
hatchet, haké,	battle-axe, kappee,
small ditto, kōndé haké,	bow, ásar,
adze, hassee,	arrow, sar,
chizel, rooka,	barbed arrow, kán sar,
crowbar, sobol,	plain arrow, kootoo sar,
pickaxe, saba,	blunt headed ditto, tootee,
hammer, kotassee,	trident ditto, roompa,
pinchers, sandasoom,	fishing arrow, pōrla,
scraping knife, katoo,	transverse ditto, sōmpa sar,
nails, mèdkinniloom,	bolt (for a kind } tonga sar,
lock of a door, bákenesèt,	of cross bow), }
bellows, sinnipoot,	spear, chooree,
file, rèta,	jingling staff (to fright- } teneké
iron, mèd,	en scorpions, &c.) } danda,
plough (yoke,) ár,	a stick or staff, danda,
shaft of plough, issee danda,	a club, sōnta,
ploughshare, n̄yl,	a flute, rootoo,
iron point of ditto, pál,	drum, doomang,
pin of yoke, samballee danda,	fiddle, banam,
thong to tie yoke & shaft, nanglee,	pan-pipes, eepoo rootoo,
sugger (jungle hackery), saggee,	kettle-drum, damma,
shafts of ditto, tagree jangee,	boorang (a cocoanut }
thong to lash on yoke, chamta,	with horse hair } bang boong,
axletree, ligga,	stretched across), }
cross bar, join- } sambalee danda,	cow horn, sakwa,
ing the shafts, } or panjaree,	a necklace, hissir,
mud board, karra,	brass bracelets, sakom,
its handle, kaba,	ditto on upper arm, taró,
earthen pot, chatoo,	ear-rings, moorkee,

ear chain, joroé and booin,	float, pooi,
nose ring, koodmoo,	bat fowling net, lowta,
peeper putta, peerpeeria,	clap net, oé janalum,
armlets, andoo,	bird lime, atta,
toe rings, katta pola,	brick trap, jampa,
finger rings, tee pola,	quail trap, room room,
a saree, s̄ye lijia,	hare net, kooltrey janaloon,
thread (for bind- ing hair),	tiger trap (made like a huge rat trap,) } koola rana- tang,
dip net, janalum,	a mat, jattee,
large ditto, kabra,	a bedstead, parkum,
casting net, mahajal, (<i>Ooria</i>),	a stool, gandoo,
small dip net, ganaree,	rafters, senéōr,
basket weir, koombat,	uprights, koonto,
dip basket, sonobo and sonolong,	wattling branches, jatta,
trap basket, jimmerree,	thatch, s̄yoo,
fishing hook, bunassee,	door, dooár,
fishing rod, bunassee danda,	wall, genil.
line, bunassee sootan,	

Parts and affections of the Body.

the body, homo,	the nostrils, mooá oondoo,
— head, bo,	— breast, kooam,
— hair, oop,	— shoulders, tarran,
— eyes, mèt,	— fore arm, soopoo,
— nose, mooa or mootaa,	— arm, tee,
— bridge of nose, mooa dandee,	— hand, tee,
— ears, lootoor,	— palm of hand, talka,
— mouth, â,	— fingers, angolee, (<i>Ooria</i>),
— teeth, danta,	— nails, rama,
— jaw teeth, gandoo danta,	— claws (of animals,) sarsar,
— gums, danta jeeloo,	— thumb, engadaro,
— tongue, aláng,	— armpit, hatla oondoo,
— cheeks, joá,	— nipple, toá,
— eyebrows, mèt kandom,	— backbone, sindree jang,
— throat, hoto,	— belly, l̄ye,
— nape of neck, sèrom,	— navel, bootee,

the penis, loé,	veins, patta,
— testes, billee,	sinews, sting patta,
— pudendum, roojee,	fever, homo hassoo,
— nates, doobooui,	dysentery, lye dool,
— anus, ee oondoo,	epilepsy, ambarree,
— thighs, booloo,	small pox, maree, (<i>Ooria</i> ,)
— knee, mookooi,	cholera, oola,
— leg, koorchoo katta,	lame, lôkey,
— calf, dooroonga,	maimed-handed, loonkee,
— foot, katta,	blind, sooree,
— toes, daro,	deaf, kalee, (<i>Ooria</i> ,)
— urine, dookee,	palsied (he is,) tirtir tannaï,
— semen, { poondée dookee or	dumb, konda,
{ hōn dookee,	squinting, apir mèt,
— fœces, ee,	stuttering, alangé jereana or jèr,
— saliva, bé dah,	rheum, manda,
— pus, sondo,	cough, koo manda,
— blood, mýoom,	flatus, gassee,
— brains, hatang,	leprous, toondoo bandia,
— bowels, joroye lye,	pain, hassoo,
— stomach, pora lye,	shivering, rookoo,
— heart, soorr,	heat, lolo,
— liver, eem,	itch, kassara,
— spleen, pillá,	mustaches, á goochoo,
— gall, issia,	wise teeth, joá jang,
— shoulder-blade, dowree,	poma adami, oot totoá,
a bone, jang,	tail, chalom,

Quadrupeds.

monkey (<i>macacus rhesus</i> ,) gýe,	hyena, { hadgar koolá, or mendee
lungoor (<i>circocebus entellus</i> ,) sarra,	
tiger, koolá,	{ koolá,
a very large old tiger, garra koom,	large red jackal, tow koolá,
leopard, teón koola,	common jackal, kurmhá,
tiger-cat, bow,	fox, tooyoo,
common cat, poosee or billýe,	dog, seta,
small tiger cat, beer billýe,	wild dog, tannee,
	bear, banna also baloo,

ratel <i>or</i> Indian badger, {	oosa ban-	four horned deer (chickera), oré,
(<i>mustela ratalla</i> ,) }	na,	muntjac deer, seeleep,
civet cat, sōgōt,		antelope, badoo,
great red squirrel, hondeng,		memina, yar,
flying squirrel, ooral,		gower, s̄ynl,
common palm squirrel, too,		arna, beer biár,
hare, koolh̄ye,		common buffalo, karra,
porcupine, jeekee,		ditto female, bitkil,
rat, kattia,		cattle in general, ooree,
bandikote rat, gooroo,		calf, miew,
musk rat, choondée,		two or four toothed bull, damkom,
mouse, chootoo,		young bullock, boysur,
ichneumon, saramboombooi,		barren cow, gowee,
pteropus (flying fox) badooree,		young cow (two or four teeth), pèta,
small bat, chootoo bardooi,		goat, boda m̄erom,
manis <i>or</i> pangolin, armoo,		gelt goat, byda m̄erom,
saumer deer, saram,		sheep, m̄enree,
neel ḡye, mooroom,		pig, sookree,
female neel ḡye, soosam,		wild boar, beer sookree,
spotted deer (axis,) poosta,		horse, sádōm,

Birds.

spotted eagle, doomoor kwid,	oriole, bocho,
jungle eagle, booroo kwid,	hoopoo, pootamdoombee,
kite, kwid,	cassican crow, hoyán,
great meadow hawk, p̄éré kwid,	bulbul, chéporr,
chicquera hawk, reechee,	Malabar hornbill, deoree,
peregrine falcon, beesree,	common <i>or</i> gingi ditto, mát tongé,
ruby-eyed hawk, halloo,	blue-throated barbet, gootoor,
pied buzzard, tookoo sambé,	Philippine barbet, koodn,
jara honey buzzard, kora kwid,	great parakeet, meeroo,
kestrel, sookla reechee,	lesser ditto, k̄éad,
great horned owl, doondoo,	common kingfisher, chooing k̄ik̄ir,
little owl, p̄ècho <i>or</i> kokōr,	great ditto, liangtong k̄ik̄ir,
butcher bird, charree,	pied ditto, marang k̄ik̄ir,
Indian roller, toían,	chesnut headed ditto, garra k̄ik̄ir,
king crow, dānchoo,	gold-backed woodpecker, hám éré

middle spotted ditto, gegèd,
 cœrulian flycatcher, hattar,
 scarlet and black } pykee oé,
 flycatcher,
 honey sucker, sooi oé,
 duree finch, gondree,
 reed grosbeak, peereed,
 pit lark, soorooi oé,
 water wagtail, ooree manda,
 koél, toaó,
 mŷna, saloo,
 hill mŷna, booroo saloo,
 crow, ká,
 Indian magpie, hoorlee,
 crow pheasant, sengel topa,
 goat-sucker, hapoo,
 swallow, hèn,
 common dove, potám,
 green pigeon, hooá,
 domestic pigeon, doodmool,
 peacock, mara,
 ditto with full train, atoommara,
 cock, seem,
 jungle cock, beer seem,
 black partridge, hendé chitree,
 grey partridge, cheetree,
 quail, bassa batta,

bush quail, gerreá,
 button quail, della door,
 rain quail, batta,
 double spur partridge, askal,
 adjutant stork, gooroor, (*Ooria*,)
 sarhuns (sŷrus,) hoorr,
 damoiselle crane, ago maree,
 white stork, ganda keea,
 great white egret, solong kantoo,
 common paddy bird, ko,
 black stork, kankee,
 black ibis *or* curlew, raón,
 Norfolk plover, kooi toopee,
 bastard florikan, kenkoto mara,
 snipe (jack *or* whole,) kèt batta,
 painted snipe, kōn batta,
 sandpiper, doolbee,
 cormorant, dah ká,
 dabchick, dah seem,
 nobbed goose, toopee hey dégé.
 whistling teal, hé dégé,
 girra teal, merōm dérébet,
 brown cuckoo, bota kakoo,
 a bird, oé,
 nest, tooka,
 egg, petto *or* billee,

Reptiles.

crocodile, pŷnl,
 iguana, torr,
 chamelion, kaka rambad,
 crested lizard, kaka,
 small lizard, rété kaka,
 rock lizard, sereng kaka,
 monitor lizard, kettra,
 tortoise, horro,

land tōrtoise, pee horro,
 a frog, choké,
 a toad, rotopoto choké,
 a snake, beeng,
 cobra capella, pando nagoo,
 cophia, russellü, pogo jarra,
 dhomun, jamboo beeng,
 kerate, barra cheetee,

tree snake, hartoo,	amphisbœna, soonoom beeng,
great ringed snake, sakôm beeng,	scorpion, marmar,
black and white } booroo gon-	scolopendra, sengel marmär,
kerate, } dÿte,	mygale, <i>or</i> bird- }
earth adder, noor beeng,	catching spider, } koola baraban-
coluber constrictor, patáyan beeng,	bindeeram,
python, toonil,	jungle spider, bindeeram,
grass snake, loyong beeng,	crab, katkom,
water snake, dah doondoo,	

Insects.

bug, majee,	ichneumon fly, koonkal ho,
cassida beetle, roopa cheedoo,	muskeeto, peechoo <i>or</i> siking,
male (winged) ant, boordool,	beetle, sadom cheedoo,
queen white ant, boonoom enga,	tumble dung ditto, ee ooroo,
red tree ant, how,	capricorn ditto, hopo,
procession ant, hab moi,	fly, roko,
little red ant, moi,	tusser moth, loomam cheedoo,
black ant, tonto,	butterfly, pampal,
boatman, gowcheedoo,	louse, tilloo,
water clock, dahoороо,	flea, sikoo,
pipula, dah cheedoo,	tick, tickee, (?)
white ant, needeer,	grasshopper, sômsorr,
water scorpion, chacha hata cheedoo,	mantis, banna jye jye,
jungle hive bee, toomblee,	cricket, tété,
wasp, soorpang,	caterpillar, jependér,
carpenter bee, pérom,	cocoon, koá,
great black bee, bah ooroo,	

earth worm, linda,	muscle, gendr,
leech, happad,	fish, hakoo,

Trees, &c.

a tree, daroo,	thorn, janôm,
branch, koto,	flower, bah,
leaf, sukám,	fruit, jo,

tamarind tree, jojo daroo,
 peepul, hessa daroo,
 burgut, b̄ye daroo,
 jack tree, ponso daroo,
 plantain, kadal,
 mangoe, oolee daroo,
 castor oil tree, bindee,
 kuchenar, sing á,
 Indian laburnum, hurree daroo,
 assun tree, hatna daroo,
 saul, sarjeem,
 jamoon, kooda,
 neem, neem,
 kurm, koomba,
 taree tree, rèldaroo,
 tillye, tillye,
 kurhar, doorlee,
 dhaó, heseldaroo,
 gloriosa superba, bing kichoom,
 b̄yre bush, bakra,
 water lily (pudm,) t̄y bah,
 a salook lily, salkát,
 mowhooa tree, mad kum,
 mowhooa berry, dolá,

keond tree (ebony,) tirril daroo,
 seesoo, kirree daroo,
 damun, goin yèr,
 gumhar, kasmar,
 maize, toorpoo gangye,
 dhan, baba,
 wheat, gōm,
 chunna, chola,
 oorid, ramba,
 ruhur, sané,
 buddee, poondée ramba,
 vetch or pea, â,
 cotton, katsom,
 sugarcane, goor danda,
 tobacco, sookool,
 soorsoo, mannee,
 surgoojia, ramtia,
 tie, tilmee,
 jowar, till̄ye gangye,
 moong, moogee,
 thatching grass, s̄yoo,
 other grasses, doomboo,
 wild grape, ee etoár,
 cocoanut, boorka,

Adjectives.

acid, jojo,
 adult (man,) ballé sepèd,
 adult (woman,) ballé papanoom,
 bad, etka,
 bitter, moroia,
 black, hendé,
 blunt, toogooma,
 broad, ossar,
 clean, boogin,
 cold, rabang,
 cool, réa,

dark, nooba,
 deep, ik̄ir,
 dirty, homoo,
 drink, booloo,
 fair, essel,
 fat, rota,
 fierce, koorkoor,
 foolish, kōnka,
 gentle, labit,
 good, boogee
 great, marang,

green, gádé,
 gross, (fat,) dildil,
 happy, jeesookoo,
 heavy, hambal,
 hot, lolo,
 hot (taste,) hád,
 large, marang,
 left (sinister,) koigné,
 light (luminous,) maskal tété,
 light (weight,) lar labbar,
 long, jilling,
 loud, essoo sarian,
 little, hooding,
 many, essoo,
 merry, billing,
 naked, tota,
 narrow, hooding ossará,
 new, nama,
 noisy, sarian,
 old (thing), paparee,
 old (man), ham,
 old (woman), booree,
 passionate, oán,
 pointed, richoop,
 pretty, boogee nellotea,
 proud, marang mordo,
 plentiful, poora,
 passive, happá,
 rabid, bala booloo,
 ragged, sèr,
 right (dexter,) etom,
 rough, kété *or* illing,

round, gota,
 red, arra,
 sad, mundookoo,
 salt, hèm,
 sharp, lessèr,
 short, doongooi,
 short (man,) toom broo *or* imiting,
 shallow, tembé,
 sick, hassoo,
 slow (lazy,) gáír,
 small, hooding,
 smooth, lebbé,
 spotted, kabra,
 square, chepèd,
 stinking, etka soana,
 striped, onol,
 strong, iting,
 sweet (luscious,) ibilla *or* nōgōd,
 slender, sooroo,
 tall, sangalee,
 thick, rota,
 thick (fluid,) eebil,
 thin (man,) battree,
 thin (fluid,) etang,
 ugly, kaboogee nellotéa,
 weak, hooding péá,
 well (in health,) boogee,
 white, poondee,
 wicked, etka,
 wise, séana,
 yellow, sassang,
 young, hōn,

Verbs.

to admit, hoojoo cheeteá,
 — admit (confess,) èákedtea,
 — advance, dáránteá,

to arise, ootanteá,
 — arrive, setreteá,
 — argue, epésértea,

to ascend, rakabteá,	to breathe, roonteá,
— ask, kooliteá,	— bring, agweeteá, awiteá,
— ask (demand or beg,) asseeteá,	— bring forth (young,) honiteá,
— avoid, ochorenteá,	— burn, rooiteá,
— awake, enéteá,	— bury, topateá,
— bake, ladéteá,	— buy, kiringteá,
— bathe, reánteá, kopanteá,	— call, jewteá,
— be, minna, (defective verb,)	— call (name), metyteá,
— beat, rootea,	— care, heátingteá,
— bear (load,) go eedeteá,	— carry, sábeedeeteá,
— be angry, oantea,	— catch, sabteá, sasabteá,
to be ashamed, giewtea,	— cavil, tirree mirreeteá,
—— cool, réateá,	— cherish, assoolteá,
—— born, oondooboteá,	— cheat, chakadteá,
—— happy, sookooteá,	— climb, dehteá, rakabteá,
—— hungry, rengateá,	— conjoin (2 streams,) léréteá,
—— hot, loloteá,	— cost, gonomteá,
—— in flames, joolatáteá,	— covet, malteá,
—— noisy, kakaláteá,	— conceal, ookooteá,
—— sad, heatingteá,	— copulate, doopooirteá,
—— silent, happánteá,	— correct, býrooÿteá,
—— sleepy, doomtea,	— count, lekateá,
—— tired, tagowtea,	— cry (weep,) raéteá,
—— thirsty, tetangteá,	— cut, hadeteá,
—— open, meeteá,	— cut cloth, changateá,
—— vexed, mundookooteá,	— cut down (a man,) máíteá,
to begin, etétea, ookoorooteá,	— cover, haroopteá,
— beg (charity,) koiteá,	— collect, gemèrteá,
— bewitch, tengenteá,	— come, hoojooteá,
— bind, tolteá,	— cross over, tarrumteá,
— bite, hooateá, habteá,	— crouch, oogoorookoonteá,
— bite off, hooatopangteá,	— dance, soosoonteá,
— blame, tomunteá,	— delay, gareeteá,
— boil (verb neuter,) pooroteá,	— destroy (any thing,) rapoodteá,
— boil, (verb active,) issiniteá,	— deny, kokodteá,
— break, perechoateá,	— descend, agoonteá,
— break in pieces, rapoodteá,	— die, gojoteá, goíteá,

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| to dig, laéteá, maéteá, | to freeze, ratanteá, |
| — dirt, homooiteá, | — frighten, { boroléréteá or boro- |
| — dive, oonoomteá, | { cheeteá, |
| — dread, boroteá, | — forsake, bageeteá, |
| — dream, koomooiteá, | — gargle, poéteá, |
| — drink, mooiteá, | — gather (together,) { gemerteá, |
| — make to drink, anooiteá, | { hoonditeá, |
| — drip, lingeeiteá, | — get (obtain,) namteá, |
| — dry, (v. n.), hanjetteá, | — get behind (hide,) danangteá |
| to drive, harteá, | — give, eméteá, |
| — drown, charoo, } goiteá, | — go, senoteá, |
| — soor, daboora, } | — go before, áirteá, |
| | — go behind, doiateá, |
| — eat, jōmeteá, | — go in, boloteá, |
| — embrace, hamboodteá, | — go out, oltea, oléteá, |
| — emit, ōlcheeteá, | — go out (quench as fire,) èteá |
| — emit (urine,) dookeeteá, | — go up, rakabteá, |
| — emit (fæces,) eeteá, | — gore, roteá, roroteá, |
| — emit (flatus,) gasseeteá, | — grasp, sabakanteá, |
| — exercise, bonga ondongeteá, | — grieve, heatingteá, mundookteá, |
| — fall, endagoiteá, | — grow, marangteá, |
| — fall (from a height,) jewteá, | — hang (suspend,) dangteá, |
| — fear, boroteá, | — hang (kill a man,) { oorooi gooĩ- |
| — feed, (or graze,) atèrteá, | { keeteá, |
| — fell (a tree,) gingteá, | — hail, (v. neuter,) harriliteá, |
| — fight, (shooting,) toopouingteá, | — hail, (call out) jewyíteá, |
| — fight (with swords, &c.), mapateá, | — harm, dookooteá, |
| — find, namanteá, | — hate, oanteá |
| — finish, sekateá chabateá, | — heap, gemerteá, |
| — fish, hakoogoikenteá, | — hear, aioomteá, |
| — fling, hoodmateá, | — hit (shooting,) toíteá, |
| — fly, apírteá, | — hide, ookooteá, |
| — fly, (pop,) etèteá, | — hold, tellýteá, sabteá, |
| — flow, harriteá, doolteá, | — howl, rateá, |
| — follow, doiateá, | — hunt, sangarteá, |
| — forget (temporarily,) reengteá, | — hurt, hasoocheeteá, |
| — forget (totally,) adateá, | — hush, hapácheeteá, |

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| to irritate, koorkoorcheeteá, | to measure, mokȳteá, |
| — issue, andongteá, | — mend, amingteá, |
| — jest, sandabȳteá, | — mind, oodkedteá, |
| — join, léréteá, | — miscarry, enda ádteá, |
| — jump, ooíteá, | — miss, katoíteá, |
| — keep, doíteá, | — mix, missowteá, |
| — keep, (in the mouth), latoométeá, | — mourn, [see To muse,] |
| — kill, rogoíteágoikeeteá <i>or</i> goíteá, | — muse, heatingteá, |
| — kill, (with a club), tam goíteá, | — name (a person), noomooteá, |
| — kiss, chérébetéá, | — name (a thing), metȳteá, metáteá, |
| — know, adanteá, adaoroomteá, | — nigh <i>or</i> near, náíteá, |
| — know, (an acquain- } nelroo- | — obtain, nameá, |
| } tance,) } meteá, | — obstruct, baribakedteá, kesedteá, |
| — lag, doiateá, | — open, raéteá, |
| — lash, rooteá, | — oppose, [see To obstruct,] |
| — last, tȳntea hobowteá | — offer (on an altar,) domateá, |
| — lament, gámteá, | — pain, hassookeetea, |
| — laugh, landȳteá, | — pass (by <i>or</i> over,) paromteá, |
| — lave, kossanteá | — peep, sangeel nelleteá, |
| — lead, eede atweeteá aírteá, | — pierce, ropootooíteá, |
| — learn, etonteá, | — place, doéteá, |
| — leave, bagéteá, | — plait, gáéteá, |
| — lie, labakajíteá, | — plant, beetteá, |
| — lie down, geetee sengèrrteá, | — play (fun,) oonoongteá, billingteá, |
| to light (illumine,) maskalteá, | — play (instrument,) orangteá, |
| — light (as a bird,) agoonteá, | — plough, seeteá, |
| — like, [see To love,] | — point at, choondoolteá, |
| — lime, (bird,) attáteá, | — poison, rédanookedté goikeeteá, |
| — line, jeedteá, | — praise, essoo booginteá, |
| — load (burthen,) goteá, | — pray (invoke,) dangeteá, |
| — loose, ratȳteá, atȳteá, áëteá, | — price, gonomteá, |
| — lose, adȳteá, aderȳteá, | — pull, orowiteá, towiowiteá, |
| — lose, (victory,) kádȳteá, | — pursue, harteá, harsabeeteá, |
| — love, jeesookooteá, | — push, oodoorteá, |
| — lurk, oogoorookoonteá, | — put, [see To place,] |
| — make, bȳteá, | — quench, éteá, |
| — make round, lagotȳteá, | — rain, gamateá, |
| — marry, audeeteá, | — ramble, honōrbȳteá, |

to rape, hoinkeeteá,	to shine, joolteá,
— reach, seterteá, tegateá,	— shoot (at,) tooingteá,
— read, olsukam porowteá,	— shoot (kill,) poíteá,
— reap, iréteá,	— shove, oodoorteá,
— recognize, nelroometeá,	— show, nellecheeteá,
— relate, oodoobteá,	— shut, handiteá,
— remember, adaoroomteá,	— seize, sabteá, sasabteá,
— repeat, kajirooŷteá,	— sign (mark,) ankaíteá,
— reside, tŷnteá,	— silence, happacheeteá,
— retire, oossanteá,	— sin, enkateá,
— return, rooáteá, dooirteá,	— sing, doorangteá,
— return (going round,) bioorteá,	— sit, doob teá,
— ridicule, landabŷteá,	— slander, cheerŷteá, oomibŷteá,
— rip, changateá,	— sleep, geeteeteá,
— rise, ootanteá,	— smell, jeeteá,
— rise (the sun,) olenteá,	— smell, (v. n.), soanteá,
— roar, ráteá,	— smile, landateá,
— roast, rappŷteá,	— snatch, rapateá,
— rub, gassaréteá,	— snore, hooirteá,
— run, (or run away,) neerteá,	— soil, homootéá,
— say, menteá,	— sound, sárioteá,
— sacrifice, bongateá, domateá,	— sound (depth), tegatam roopteá,
— salute, joharatweeteá,	— sow, hereteá,
— save, bunchibowteá (<i>Ooria.</i>)	— skin, potateá,
— scare, borocheeteá,	— speak, kajeeteá,
— scold, erangteá, gondeteá,	— spit, béhteá,
— scratch, gotaēnteá,	— spoil, enkateá,
— scream, yewtanteá,	— square, lachepedeteá,
— see, nelloteá, nelteá,	— stand, tingoonteá,
— sell, akaringteá,	— steal, kombooteá,
— send (away,) kooltyteá,	— stink, etkasoanteá,
— send (for,) keáowiteá,	— stop, (v. n.) tŷnteá, tingoonteá,
— set (down,) doíteá,	— stop, (v. a.) kesedteá, dárumteá,
— set on flame, atarteá,	— strike, rooteá,
— sew, sooeteá,	— string (a bow,) dahteá,
— shake (shirer,) v.n. tŷr tŷrleá,	— suck, lététeá, chopodteá,
— shame, giewteá,	— summon, [see Send for,]

to suspect,	} amgengamden to-	to vex, atteá,
— swear (oath,) sarraenteá,	munteá,	— vomit, ooloteá,
— swim, oiarteá,		— wake, eneteá,
— take, (in the hand,) tellýteá,		— walk, senoteá,
— teach, etokeeteá, etocheeteá		— wander, hōnōrbýteá,
— tear, oë chachateá,		— want (ask,) asseeteá,
— think (deem,) adkarteá,		— wash (cloth, &c.,) eetkitteá,
— thirst, tetangteá,		— wash (the body,) noánteá,
— throttle, lingoikeeteá,		— wash (the teeth,) karkadteá,
— throw, hoodmarateá,		— waste away (the body), oosooteá,
— throw away, endateá,		— wet, loomteá,
— throw down, endaéteá,		— wear (clothes,) botoëteá,
— tickle, gérégeteteá,		— weave, lijia tingéteá,
— tie, tolteá,		— weep, raëteá, yámteá,
— transplant, roaéteá,		— win (victory), málýteá, mádýteá,
— tumble, endagoiteá,		— wither, roteá,
— turn, (v. n.) bioorteá,		— work, pýteeteá,
— understand, aoomooroomteá,		— wound, gowkeeteá,
		— yawn, chábeteá,

Conjunctions, Prepositions, and Adverbs, &c. &c.

yes, èya or èá,	where ? okoiré ? okoitár ?
no, banno, bannoá,	how many ? cheminang ?
not or not so, ká,	so many, eminang,
none, bankwá,	then, { emindré, enté, entédo,
certainly, bâchiad,	or enété nádo,
perhaps, honang, derang or torá,	forwards, aïrté,
“ Oh, that’s it ? ” or {	backwards, oosá,
“ Say you so ? ” } ké ?	before, aïrté, aïrdo,
and, ando or òndo,	firstly, seeda ré,
“ Of course,” ando ?	now, ná,
“ I say ! ” helá ! ettia !	long ago, moonooré,
“ Is’nt it ! ” kachia !	afterwards, t̃yoomdo, entét̃yoomdo,
“ Hullo, there ! ” ocho hé !	any one, amba,
when ? chooila ? okobetár ?	with, lo, loté,

alone,	} soomang, eskarchim	on one side, kootée ré,
	(<i>A Sontae word</i> ,)	far, sanging,
great many <i>or</i> very, essoo,		near, náité <i>or</i> jappar,
much, poora,		above, sirma ré,
then (at that time,) enbétar,		below, sooba ré,
hither, neepárté,		behind, danang ré,
thither, enpárté,		quickly, buddeeté,
hence, niaité,		separate, essam,
here, nendré,		in, <i>ré</i> ,
there, endré,		out, by, with, from, <i>te</i> ,
		} both are affixes,
the other side,	} tèrrparte <i>or</i> tèrr-	the whole, jaké,
	parparrum,	the half, talla,
this side, niparparrum,		each, mootid,
in the midst, talla ré,		

Adverbs are formed by adding té to their adjectives.

like, leká,	why? chikan menté,
a little, anga <i>or</i> angalekà,	"never fear" "there now!"
or else, bandrédo,	"depend upon it" &c. } joo!

To this Vocabulary might be added a long list of terms of relationship, more elaborate in the *Ho* language probably than in Hindustanee; also a catalogue of *Keelees*, or Clans, into which the *Hos* are subdivided; but these I omitted ascertaining during my stay in the Kolehán, and the opportunity of so doing is now lost. Many of their proper names are names of birds, beasts, &c, and from their birth they frequently retain nick-names, descriptive of some peculiarity in early childhood.

A few names of Places.

Chȳbassa, the dwelling of Chȳe,	Lossod ikir, the muddy pool,
Pootoo dirree, the window stone,	Roko sookoá, "pleasant to flies,"
Tonto hattoo, village of ants,	Sȳul dowree, the gower's shoulder,
Kead chalóm, parakeet's tail,	Kattia mara, rats and peacocks,
Hoio hattoo, village of winds,	Sarjum hattoo, village of Saul trees,
Geetil pee, the plain of sand,	Kadulsookwa, { "pleasant in
Bye hattoo, village of Bur trees,	plantains,"

Names of Rivers, Hills, &c.

Hackoo yámdah, {	the water of	Charree booroo, hill of butcher birds,
	weeping fish,	Mara billee, pea-hen's egg hill,
Roro garra, roaring river,		Ooree manda, bullock's track hill,
Oéko atta dah, bird-lime water,		Hâm booroo, the old hill,
Toongi garra, the clear river,		Toopooing pee, the plain of battle,
Sompa serra, hill of arrows,		Saél poét booroo, } hill of the shot
Sereng serra, hill of rocks,		
Abooroo, hill of the wild pea.		gower,

Names of Persons.

Potam, a wood pigeon,	Dildil, corpulent,
Loké Damoo, lame Damoo,	Madkum, mowhooa tree.
Jeetoo Mangta, little baby Mangta,	Ooroo, a beetle,
Sooree Lenga, blind Lenga,	

Dialogues.

What is your name?	Umma chikan noomoo?
Mine? Markundo.	Eenga chee? Markundo.
Of what clan are you?	Chikan keelee oum?
I am a Poortee.	Poortee neegé.
Where do you live?	Okoré minna mia?
In Goomwa.	Goomwa ré.
Where do you come from?	Okomanna té um hooilena?
From Ramila, which is in Keon- jur.	Ramila té eeng hooilena; Keonjree ré Ramila.
Where are you going to?	Okoté um seno tanna?
I am going to Seryekela.	Saïr té eeng sèna.
What business have you come on?	Chikan kajee réum hoojooèna.
Some dispute about land.	Otéá épèsèr minna.
Where is your house?	Umma oádo okorea?
In Ramila, I tell you.	Ramila ré, metamtannyng.
Is your house far from hence?	Umma oá niaité sanging achée?
Very far! It is across the Byturnee,	Essoo sanging honang! Byturnee garra parrum.

What is your trade, or calling?	Chikan p̄ytee té um assoolotanna.
I sow (am a ryut,) Sir.	Hertann̄ȳing, gōmké!
What is your father's name?	Appoo'm do chikan noomoo?
He is dead.	Goien ái!
Yes, but did you not call him by some name when alive?	Eyá, mendo áio jeedakauré kaché'pé noomootadaï?
We called him Harree, but I tell you he is dead, Sir!	Harree'lé metá: goiénai, gomké! metam!
Are you married?	Andeekiddum?
No; I will marry by and bye.	Bannoá; owré engandeea.
Is your house finished?	Umma oá do sekiena chee?
Have you brought any grass?	S̄yoo um ōwlidda chee?
Yes, I have brought some.	Eyá, owlidd̄ȳing.
Have you cut any trees for me?	Aĩng nangenté daroo gingkiddum?
I'll fell some to-morrow.	Gappa eeng geengia.
I do not understand you.	Umma kajee do ka'ing etoitanna.
I do not know.	Ka'ing adana.
Call an interpreter.	Mar, soosansee kew̄ȳmén.
Put it on the ground.	Oté ré doimén.
Work quickly; do not be lazy.	Buddee p̄yteepe, hé! Aluppé gareena.
Do not go away now.	Nádo alum seneá.
Wait a little.	Angaleka gareemén.
Throw it away.	Enado hoodmaendamén (or simply) endamén!
Let it go.	A ty mén.
Do not let it go.	Alum âyá.
Hold it.	Sabakanmén.
This is not good.	Niá do ka boogeea.
Make it again.	B̄y roōȳmén.
Take care!	Boogeté, hé!
Get out of the way.	Hora ankira mén.
Stand aside.	Ochor en mén.
Open it, I will see.	Ráĩ mén, nel jōm̄ȳng.
Shut it, or it will escape out.	Handit ái mén, bandredo neeraĩ.
Cover it.	Haroop táĩ mén.
Go on before.	Aĩrte seno mén.

Come along, come along!	Do, do, do, do!
Come, get on.	Do! aïrémén.
No I won't, I am tired.	Ká'inga; lagaiënaing!
What? do you feel ill?	Chia? um hassooiëna?
I feel very ill, Sir.	Essooing hassooiëna, Gomké.
Where do you feel pain?	Okotarré hassoo metanna?
I have got a headache.	Bo ré eeng hassooiëna.
A thorn has run into my foot.	Kattaré janum boliëna.
When did your father die?	Appoo'm do chooila goyéna?
Ten years ago.	Gel sirma iëna.
How long have you lived there?	Amdo chiminsirma endré t̃ykenum.
Where did you live before that?	Aïrdo okoiré umt̃ykenna.
Why did you leave that place?	Entado chikanminna bagéátoodum.
Why did you run away?	Umdu chikan menté'm niriëna?
I thought they would kill me.	Goïkee'ngiako, menté eengririëna.
Whose bullocks did you steal?	Okoia ooreeko umkombookenna.
I didn't steal them.	Ka'ing kombookedkoa.
How many cattle were there?	Chemin ooreeko t̃ykená.
There were a great many.	Essooko t̃ykena.
Did you kill any man?	Midho amba um goïkeeachee?
Did you wound any one?	Okoiamba um gowkedda chee?
I wounded one man with an arrow.	Midho eeng poitkeea.
I shot twice. ("two shoots,")	Bar m̃yl eeng tooingkeea.
How many were you all?	Chemin horo'pé tykena?
There were only two of us.	Alleeng do bar ho soomang.
There were only three of us.	Allé do appé ho tykena.
I was there alone.	Aïng soomang.
Was it dark at that time?	Enbétar do uooba tanachee?
No, it was light.	Bannotora! maskal akanna.
Who seized you?	Okoï sabked mia?
Jurryekussat's son, Mahtee, seized me.	Jurr̃yekussatá hon, Mahtee, do, sabkedingia.
Did he bind you?	Tolkedmiáï?
Yes, he bound me with a rope.	Eyá, b̃yre té tolkedingiaï.
If I let you go, will you ever shoot at any one again?	Eeng âmiëndredo, t̃yoomdo okoi- amba tarté um tooingiachee?
No, I will not, there!	Banno, ka'ingtooingia, joo!

Lying is not proper.	Labbakajee do kái boogeea.
Killing any one is not proper.	Okoido goitatabdo ka boogeea.
If you kill another man, you will be hung.	Etáho goikendredo, um fansee na-moa.
If you threaten or annoy him, you will be put in prison.	Aído eranglérédo, chee boroeeree lérédo, endredo koid o'um.
Bring him to me to-morrow morning.	Ineedo gappa setá eengtáté aw-imén.
Do not beat him, but do not let him go.	Ineedo alum rooia, mendo alum sénécheea.
If he will not come, bind him and bring him along.	Ineedo káihoojooredó, tolkété ag-weemén.
Do not give him anything.	Ineedo chikanna alum emáyá.
Show me.	Nelécheeing mén.
Have you found it?	Námleea chee'm?
Oh, go and seek it properly.	Joo, boogeté nam b̄y mén.
Do it again.	Enka roōy mén.
I fancy you are a lazy man.	Umdo gareeho honang.
You do not speak truth.	Umdo saree ka jee do ka oodoobtan-na. Deeta té kaum oodoobtanna.
Take care, you will tumble down.	Boogeté ! enda gojoun.
Call him, call loud.	Yew̄ymén. Pooraté yew̄y mén.
Tell him to show the way.	Hora aïromén, met̄ymén.
I want it as long as this.	Neminang jilling báe.
Longer than this.	Niaité ōndo jilling.
Take it away.	Eedeēy mén.
What is the price of this goat ?	Neemeromá cheminang gōnōm.
Two rupees.	Bar taka.
You ask a very dear price.	Essoo um gōnōmtanna.
No ; it's a very large goat.	Bannoa ; esso marang mérōmáï.
I will only give you one rupee.	Meetaka soomang eeng èmama.
No, I won't take it.	Banno ; ká'inga, k'áinga !
How many fowls will you sell for a rupee ?	Meetaka ré chemin seemko um akaringa ?
Twenty fowls for a rupee.	Meetaka ré hissee seemko.
Well ; but give me good fat ones.	Mar ! men do boogee rota seemko emaïngmén.

Hullo Sir ; will you buy this young monkey ?	Hé gōmké ; nee g̃yē hōm umkee-reengia ?
Why ; what do I want with a young monkey ?	Chia ? g̃yē hōuté ch'eeng chik̃yā.
Oh, there was a Sahib here, used to buy them, once.	Ké ! moonooá gōmkédo k̃ringked-koá honang.
That's why I asked you.	Enaré eeng koolikedmia.
I want none of your wild beasts, but bring me fowls, goats, cows, eggs, rice, straw, wood.	Enleka beer jattee do k̃yngá, men do seemko, meromko, pétako, seembilleeko, chowlee, boosoo, san eengtar té agweemén.
What have you got for sale ?	Chikan um akaringia ?
A very large rattlesnake, Sir.	Essoo marang pogo jarra beeng, gomké.
Take it away ; take it away !	Mar, eedeẽy men, k'aīnga !
Never let that boy come here again.	Enkoádo ondo missa aluppé.
Deuce take him ! (let tiger bite him.)	Hoojoocheea. Koola kái háb !
I want to sleep.	Eeng do eeng geeteeā.
I can't sleep, you make such a noise.	K'aīng geeteẽyā ; essoo'pé kaka-la.
Do not talk loud.	Pooráté aluppé kajeeā.
What do you want ?	Chikanum asseea ?
I am a poor beggar, Sir.	Koītannaīng, gomké !
Do not drink more, you will be tipsy.	Ondo do alum noonooá ; booloo ōum torá.

Out of doors.—Shooting &c. &c.

Come along, come along, let 's go a hunting.	Dé, dé, dé, dé, sangaraboo !
Let 's all come along !	Do laboo hé !
Let 's go to Dugra hill.	Dugra booroo té' boo sēná.
There are plenty of bears there, and peafowl, and chicquera deer.	Nendredo essoo bannako minna ; ondo marako, ondo oréko minna.
Do you all scour the hill.	Appédo booroo parrumté sangar aweepé.

We will stop the gháts.	Allédo gáttee kesedkoá.
There 's a bear coming, Sir.	Báloo dára, gomké.
Dubro has shot him in the back with an arrow.	Dubro mee m̄yl doia parré poít keeaï.
This way, this way, he is cross- ing over.	Niparté, niparté ! parrumoai.
He 's hit ! he has tumbled into the ravine.	Tōyenáï ! Hooang ré enda goiènaï.
It 's a she bear ; there are two cubs.	Enga baloo dérang. Bar hōnking minna.
Hullo Sir, I 've shot a peacock.	H̄y gomke ! mara eeng poít goikeea.
Are there any deer in this jungle ?	Neebeer rébeerjeelooko minnachee ?
There are, Sir.	Minna koá, gomké.
None now ; we made such a noise, they must be all off.	Bankoá nádo ; essoo'lé sarrièna n̄riènaako honang !
Well ; let 's try a little.	Mar ! nel namaboo.
Don't kill the bear's cubs ; I will rear them.	En baloo hōnko aluppé goikeea assoolkoaing.
There was a tiger on Toongboo- roo, last night. I heard him roaring.	Enang needa Toongbooroo ré koola t̄ykennáï, eeng áï rátanaï aïoo- madaing.
I think we shall get nothing here.	Eeng adatannaing, nendré chikani o ka namoá.
What do you think ? What is your advice ?	Um chikanum héatingtanna, um- ma sianré chikana'm kajeea ?
Which is the way to Cherye ?	Oko hora Cheryeté senteá do ?
Why, this is a very high hill.	Essoo marang booroonee géderang !
The trees are all in flower, and the water, is deep and clear.	Sabee darooko bahtanna, ondo nádo dah o ikeera, ondo toongé toongea.
What ? is this the Kurkye ?	Chia ? niado Kurkye garra chee ?
Of course ; What else ?	Eyá andō ?
The water is running very fast.	Dah do essoo harritanna.
Are there alligators here ?	Nendré do t̄ynl ko minna chee ?
None now ; there are in the rains, certainly, but you can't see them.	Bankoá nim̄r do ; gammadin ré minna do minna, mendo kako neloá.
Are there any fish ?	Hakoo ko namoá chee ?

Plenty of them.	Essoo ko á.
We net them once a year.	Sirma mootid allé jallum kotanna.
The large fish swim deep, and lie under the big stones.	Marang marang hakoo ko ikir dá ré ko t̄yena, ondo marang dirree latarré oogoorookoonako.
Where are you two off to?	Okoté' bená?
We (two) are very tired, and are going home.	Essoo'ling lagièna. Oáté'ling rooá.
I am very thirsty ; where shall we find water?	Essoo'ing tetangièna, okoréboo dah namoá.
This spring is dry.	Nee seting sood do hanjetièna.
Eat some mangoes.	Oolee ko jōmmén.
This is very sweet.	Nia do essoos Sibillá.
Let's all return home ; it is getting late.	Oa té rooá' boo ; aiobièna.
It has been very hot to-day.	Tising do essoos jétéièna.
I want to bathe.	Eeng oran̄ying.
We all bathe here, under the tree.	Sabee hokoallé nee daroo soobaré gé réanna.
Don't go in here, somebody has been washing clothes.	Nendré do alum boloa, okoi do ljjia eet kidkeea.
Sikhoor swims very well, but Harree dives better than he.	Sikhoor essoos oiar etoána, men do Harree áĩ táite essoos boogee oonoom etoána.
How far is it from hence to Ch̄yē-	Niaité Ch̄yēbassa sentea do chemin
bassa.	sanging a'chee?
About three coss.	Appé gowdee leká.

Weather, &c.

It is very cold to day.	Tising do essoos rabangá.
It is blowing hard.	Hoio do essoos dárá.
There is dew on the ground.	Oté ré saparoom dah minna.
It has'nt rained one day, for two months.	Bar chandoo ièna moosing do ka gammakidda.
It is raining over Charree hill.	Charree booroo chattan ré gamma tanna.

Ooreemanda is hid in clouds.	Ooreemanda booroo do reemeed ré danang ièna.
It is getting cloudy, and blows hard.	Reemeel hobowtanna, hoio essoo.
I hear the thunder : it will certainly rain to-day.	Dará : reemeel saree aïng áïoomtanna, tee sing bâtchiad gam̄ya.
There is no moon, but the stars are shining.	Chandoo do bannoá, mendo eepilko jooltanna.
It is very hot (from closeness, in distinction to sunshine or fire.)	Essoo balbala minna.
It froze last night ; there was frost on the ground this morning.	Enang needa jaké ratankiddaï, teeing seta ogé doomboo ré ratang dah minna kannna.
I am wet through.	Essoo eeng loomièna.

With a Prisoner, &c.

Did you steal Sangee's money?	Sangee a taka um kombookenna chee?
No, I never stole it.	Banno ; k'aïng kombookidda.
Did you enter his house last night.	Enang needa áïa oáté um boloiena chee?
Yes, I went to ask for tobacco.	Eyá boloienáïng, sookool eeng asseea, menté.
Did you kill your son Kapore?	Umdu amma hon Kapore goikeea chee?
Yes, I killed him.	Eyá, goikiddáïng.
For what fault did you kill him?	Chikan cheera ré um goikeeáïa?
He never committed any fault.	Missa do k'aï cheerakidda.
We were both starving.	Rengé' leeng gojotanna.
I had nothing to give him to eat.	Jometea do ján jeta do k'aïng emai dya.
He cried, and looked in my face.	Rákiddaï, eean medre nelkidaï.
He was weak, and laid down on the ground.	Pé do ka t̄ykidda, entenado otéré geetee enáï.

He lay down in the jungle and could not rise again.	En beer ré geetee enaï, ondo k'aï tingoo rooŷ d̄yā.
Night was coming on, and I heard the tiger roaring.	Needa hendiènte, koola o rátanna aioomadāing.
And I thought he would seize you, my poor boy, if I left you.	Enkoola do jeedakanre habmiaï torá, eeng bagee endredo, menté adakiddaing, koá !
And so I killed you !	Entenádo. Goikedmiaing !
I then buried him in a ravine, Lest the wild beasts devour him.	Enté do hooang ré eeng topotad̄yā. Beer jeeloo do kako jomaï, menté.
I went away slowly, for I was weak and ill.	Maité eeng seniena, jan pé o ban- noá, essoo eeng hassooièna.
And when I had got further into the forest, I thought I heard him call.	Ondo nádo en beer ré bolokedté, iewaing tannaï, adakidaing.
And then I fainted away.	Enté nado eeng goyenaing.
But he calls me now every day.	Mendo nádo dimsee aï kewaing tana.
In the morning, and noon, and night I hear him call, Father, oh father !	Setta ré, singee ré, needa ré kewaw- ing tannaï, Appooing, appooing, hey appooing !
So I cannot eat, I cannot work, I cannot laugh, I can live no more !	Enté k'aïng jōmd̄yā, k'aïng p̄ytee d̄yā, k'aïng landa d̄yā, jeed do k'aïng jeed d̄yā, ná do !
So hang me, Sir ; kill me quick, and this wretchedness is over !*	Mar, fansee emāing mén, mar, buddee té goikeeing mén, gomké enté chabiena nee gé !*
It was a very dark night, and Serám tumbled into the well.	Essoo marang hendé needa t̄ykidda, Seerám chooáré iew kanjooienai.
We called him, but he gave no answer.	Allé essoo'lé iewkeea, k'aï gōnga.
When they brought a light, we found he was dead.	Enté sengel owliddako, maskal ki- dallé, enté'lé nelkeea, goia kan- naï.

* The above is taken almost verbatim from the confession of a Ho prisoner, who delivered himself up after the murder of his son in the woods of Ooisooia in Kotegurhppeer, 1837-38.

I shall begin to-morrow. Bindrye Gapá eeng ètéá. Bindrye hola é
commenced yesterday. onkooroo kidda.

Examples of the Imperative Mood, Future tense, &c.

- | | |
|---|--|
| You sing a song, and he will play
the flute, all the girls will
dance. | Umdoorangémén, áido rootoo oran-
giaï, ondo sabin erakosoosoon
ako. |
| Never steal, never take what is
not your's. | Já emindreo alum kombooia, okoá
ammabeetee bannoa, enádo alum
eedeaa. |
| Never covet another man's goods. | Já emindréo etá hoá beetee ré alum
malloá |
| Do to others as you would that
others should do to you. This
is the great secret of well-
doing. | Umchileka sabeehoko taíté boogee
umnamtanna, enlèka sabee hoko
umboogeeekomén. Sabee boogee-
oteá nerégé minna. |
| Never take God's name in vain. | Sing Bonga á noomoon landa ba-
karé alum doia. |
| Do not let them go to the river. | Garra par té alo kako sèn or alum
seneecheekoá. |
| Go quietly, and peep over the
wall, see what he is doing. | Maíté senketé, genil ré sangil nel-
leemén chikanaï chikatanna. |
| Hear me well. | Boogeeaté aioomingpé. |
| Ask me what you wish to know. | Chikana'pé kooleea, enao koolee-
ing'pé. |
| I speak for your good. | Appea boogee nangenté kajee pé
tannáing. |
| I will not deceive you. | K'aïng chakad pé á. |
| Others have deceived you. | Adong do chakad'pé kidda. |
| Do not believe in false gods ;
there is but one God. | Sama Bongako aluppé mannating
koá; bonga do miad soomang
minna. |
| My God is your God. | Eenga Bonga, enao appea Bonga. |
| What you say, he hears. | Chikana'pé kajeeá, enao aioom oáï. |
| Whatever you do, he sees. | Chikana'pé chikya, enao nelláï. |

From his eyes you cannot hide.	Aïamèdté appé do ka ookoodyā.
In trouble, he will deliver you.	Appé mundookien dredo, bunchi- ba'piāi.
In fear, he will preserve you.	Appé boroindredo, do'péai
Without him, you will perish.	Aï k'ai tynredo, gojoapé.
With him, fear nothing.	Aï tynredo, ján aluppé borýa.
Believe in him, and he will give you all things.	Sareeyépé, sabin ái ema'peá.
He made you and can destroy you.	Býked'peai, goikeepédýa.
Keep him in your hearts.	Jeeré do aïpé.
Never forsake him.	Aluppé bagai'pé.
I leave you ; but remember my words.	Bagé' pétannaing ; mendo eenga kajee heating pé.
Fare you well.	Boogee té tyn'pé.

Translations of *Ho* songs, &c. I have omitted. The Vocabulary having grown more voluminous than I had anticipated.

S. R. T.

A short account of Khyrpoor and the Fortress of Bukur, in North Sind. By Captain G. E. WESTMACOTT, 37th Regt. Bengal N. I.

The recent achievements of the British Army in Sind and Kabul have advanced our frontier to the Indus, and placed in our hands the fortress of Bukur and the town of Sukhur in Khyrpoor, places of the first importance, as they command the navigation of one of the finest rivers in the world; the route by which an army can threaten our territories from the north, and the productions of Persia and Central Asia are transported to Western India and the ocean.

During a residence at Sukhur, in the summer of 1839, I obtained some information about the country adjacent, which I have the pleasure to lay before the Asiatic Society, in the hope, as little has yet been published about Upper Sind, that it will be acceptable. The Government were jealous of their subjects mixing with the British, and narrowed the circle of my inquiries. I did not visit the interior of the country, and the information is defective on points I had wished to elucidate, but it will be found, I believe, tolerably correct.

It is difficult to define the extent of territory belonging to the prince of Khyrpoor, because intermixed with that of Hydrabad, but I shall describe first his possessions east of the Indus, and afterwards those on the west bank of the river.

The territory east of the river is included within the parallel of Lat. $26^{\circ} 50'$ and $28^{\circ} 50' N.$, and Lon. 68° and $70^{\circ} E.$ It is bounded on the north by the independent chiefship of Daodpootra; on the south by the possessions of the Ameers of Hydrabad; on the west by the Indus; and on the east by the Rajpoot principality of Jeysulmeer. Its extreme length, measured from the Daodpootra frontier southward, is 100 kos,* or about 120 English miles; and its breadth from east to west nearly the same.

Two-thirds of the district attached to the petty fort of Subzulkot in north Khyrpoor belong to Noor Moohummud, the senior Ameer of Hydrabad, and the remaining third to Meer Roostum of Khyrpoor. They nominate their own governors and divide the revenues. Subzulkot is on the route travelled by caravans from Kabul, the Punjab, and Northern India, which pass through Buhawulpoor to Sind; and duties are levied at the custom-house on transit merchandise.

The purgunnah of Shikarpoor is often called Moghulee, from having been peopled in the time of the Dooranee kings by Puthans and Moghuls from Afghanistan. It lies near the northern limit of Sind, on the west bank of the Indus, and the revenues and expences are divided into five shares, three of which belong to Noor Moohummud and Nuseer Khan, the senior Ameers of Hydrabad, and the remainder to Meer Roostum and his brothers. It extends north-west to Rojhan in the province of Kuchee, about twenty-five miles beyond the city of Shikarpoor, on the road to Kandahar. Southward it reaches within about sixteen miles of Larkhanu in the purgunnah of Chandkoh in Lower Sind, and has the Indus on the east. This district was invaded several times by the Talpoorees prior to 1810, when Meer Sohrab Khan, the father of the reigning Ameer of Khyrpoor, seized upon Sukhur, and twelve years later wrested the whole of Shikarpoor from the royal family of Kabul, and annexed it permanently to Sind.

North of Shikarpoor and west of the Indus, Meer Roostum holds the districts of Boordgah and Keen, inhabited by tribes of Boordees and Kuchees, who are poor, idle, addicted to plunder, and under imperfect subjection. Boordgah is celebrated for its pastures, which nourish the

* The Khyrpoor kos is $1\frac{1}{4}$ or $1\frac{1}{2}$ English mile. The people call it fifty kos from Bukur to the fort of Shahgurb in the desert, on the confines of Jesulmeer, and the same from Shahgurb to the city of Jesulmeer, and accomplish the whole distance in ten days. Subzulkot is forty kos from Bukur, or three days' journey for a horseman, and four for a pedestrian.

finest cattle, goats and sheep, of any district under this government. It produces a good description of wool and wheat, joowaree, cotton, and plenty of sakur, a red dye obtained from the flowers of tamarisk, which grow on the banks of the Indus.

The country on the east bank of the Indus south of Daodpootra, including Khyrpoor and the space below it, as far as the 26th parallel of latitude, is called Surae, which means north in the language of Beloochistan; and that on the opposite bank from Boordgah southward to the purgunnah of Chandkoh, is called Moghulee. North Khyrpoor, comprising Oobara on the Indus, and the space eastward to the Jeysulmeer boundary, was called formerly Umeer Wuhun, and seems to have belonged in the end of the 7th century of the Hijru, to Nusrut Khan, Sooltan of Mooltan, who bestowed it as a dowry on his daughter on her union with Budr Deen, grandson of Moohummed Mukae, the venerated founder of Bukur.

Khyrpoor is lotted into shares among the brothers of the Talpoor family, who subdivide them into portions for their sons, nephews, and relations; these are mixed with much confusion, and the same individual holds lands in five or six different places. Meer Roostum, who occupies the *musnud*, has a great deal the largest portion, but allows his brothers to govern their districts and dispose of the revenues as they choose. Their lands usually descend from father to son, but all acknowledge Meer Roostum as the lord paramount, and assist him with troops in time of war. On the birth of a male child in the prince's family, he allots a portion of the royal lands for his maintenance.

Some of the districts into which Khyrpoor is divided are extremely small, and named after their chief towns. In general the inhabited spots distant from the Indus, are scattered wide, and people call every place a town which has forty or fifty houses.

The districts are as follow—

Boong, } Under Meer Roostum.
Bara, }

Subzulkot—Meers Noor Moohummed and Roostum.

Raotee—Ulee Ukbur.

Meerpoor, } Nuseer Khan.
Ghotkee, }

Roree, including the ancient city of Alore—Meer Roostum, Ulee Ukbur, and Ulee Morad.

Khyrpoor, or Gagree—Meers Roostum and Ulee Morad.

Dijeeekot—Meer Ulee Morad.

Raneepoor.

Halanee.

Ludha, }
 Gagun, } Meer Roostum, Nuseer Khan, and Ulee Morad.
 Mathelo—Meer Roostum.
 Futtihabad.

The principal divisions of Moghulee are—

Shikarpoor, }
 Jutvee, } Nuseer Khan.
 Sukhur, }
 Noushuhra—Moohummud Husun.
 Roopa—Meer Roostum.
 Durbelo—Ulee Morad.
 Goonjaba, }
 Futtihpoor, } Meers Roostum, Nuseer Khan, and Ulee Morad.

The reigning family is a branch of the Talpoor tribe, which came originally from Shahzadpoor on the mountains of Kuchee, the most easterly province of Beloochistan. Other writers have given an account of them, and I shall merely state that their ancestor Byram Khan was minister of state under Mirjan Surfuraz Khan Kalhora, by whom he was cruelly slain with his son Sobdar about the year 1775. His death produced violent disturbances in Sind, for he possessed extensive influence with his tribe, and the people of the country. In 1781 Bejur, another son of Byram Khan, shared his fate by order of Mirjan Abdool Nubbee, uncle of Surfuraz Khan, which exasperating the Talpoorees, they rose in a body, and having dethroned the tyrant, raised Futtih Ulee, the grandson of Byram and chief of their tribe, to the government, which has continued ever since in the possession of his family. This revolution occurred about fifty years ago, in the reign of Timour Shah of Kabul, to whom Sind was then tributary. He had endeavoured in the commencement of the struggle to restore the Kalhoras, but was not latterly in a situation to assist them, and formally invested the Talpoorees with the government.

Meer Chakur Khan, the grandfather of the reigning prince, was the first of his race who obtained authority in Khyrpoor. He went blind from age, and was succeeded on his death by his son Sohrab Khan, who died also at an advanced age in 1830, and left five sons :

Meer Roostum Khan, who succeeded him.

Meer Ghoolam Hydur, (deceased.)

Meer Moobaruk Khan, (deceased.)

Meer Chakur Khan.

By another marriage :

Meer Ulee Morad.

Meer Roostum has issue seven sons :

Moohummud Husun.

Ulee Ukbur.

Mooreed Hydur, (dumb.)

Ulee Murdan.

Sher Moohummud.

Ullah Buksh.

Ghoolam Moohummud.

Meer Ghoolam Hydur left issue :

Moohummud Khan.

Uhmud Khan.

Moostufa Khan.

Meer Moobaruk died in 1839, and left issue five sons :

Meer Naseer Khan, who succeeded to his father's possessions.

Moohummud Ulee.

Fuzl Moohummud.

By another marriage :

Ulee Moohummud.

Wulee Moohummud.

Meer Chakur Khan has one or two sons, whose names I did not learn.

Meer Ulee Morad has issue three sons :

Kuka.

Sohrab.

Ghoolam Hoosyn, born 1839.

Nearly all the royal family dwell in the capital. The prince's residence is too insignificant to be called a palace, and has no appearance of splendour or magnificence. The habits and manners of the court have the character more of a nomade horde, than a settled government. Little etiquette is observed. The armed retainers of Meer Roostum crowd rudely into his presence, and though he is frank and affable, most of his followers are deficient not only in courtly polish, but the common forms of good breeding.

From the proximity of Sind to Northern India, and the easy means of communicating with that country by the Indus, it is strange that people have borrowed none of the comforts and luxuries of their neighbours. Sind was governed several hundred years by viceroys of the Moghul empire, and has maintained an intercourse with Delhi since the invasion of Moohummud Ghoree, in the end of the fourth century of our era. The arts and manufactures are notwithstanding in a barbarous state, and with exception of the silk fabrics of Thatta, exhibit no mark of good taste. The

carpenter unites the profession of bricklayer, and is ignorant of the use of the line and plummet. The smith can neither turn a hinge, nor fashion a screw. The hills produce excellent lime, which is turned to no account, and the public edifices which are at all remarkable, were built by foreign workmen, or at least under the superintendence of foreigners.*

The houses of the better class in towns, are often on a par externally with the cotter's hut of India, and equally deficient in accommodation within. While such is the state of the arts in towns, it is not surprising to find the peasant ignorant of the common mode of thatching and building, and though the banks of the Indus are clothed with grass, he covers his dwelling with tamarisk boughs put together without order or arrangement.

The princes keep large packs of dogs, of a powerful and ferocious breed peculiar to Sind, and pass much time chasing the boar in the preserves and tamarisk woods near the Indus. They hunt on the battu system, and sit in houses thatched with reeds, elevated many feet above the ground, in openings of the jungle, and shoot the game which are driven through the avenues by beaters and dogs. The Shikargah, or hunting preserves, are surrounded, like those in lower Sind, with hurdles, thornwood, and reeds, woven into a fence twelve feet high, and contain tigers, boars, wolves, porcupines, hog-deer, jackals, hares, and foxes. Some of the most fertile lands in Khyrpoor are reserved for this pastime, and overrun with accacia, tamarisk, and underwood, which the people are prohibited cutting under a severe penalty. Sometimes a multitude of peasants armed with sticks and clubs are mixed with matchlock men, and surround the hunting thickets, and by narrowing the circle, drive the wild beasts towards the Ameers, who dispatch them with long and heavy barrel guns with flint locks. The villagers are gathered together to assist in these expeditions, and view them with fear and alarm. They are often injured by gun-shots and the attacks of wild animals, and rarely paid for their labour. Sometimes they receive a small allowance of food, which is taken from the grain-seller at a fourth less than the market rate, and bankers support the chase with loans forced from them, and paid by an order on the revenue. They are left to settle with the land owners the best way they can; they have infinite trouble to collect their due, and never realize it in full.

* The great mosque at Thatta was built by a viceroy of Ourungzeeb, and is perhaps the finest public edifice in Sind, but far inferior in beauty to the same class of buildings in Northern India. The great mosque at Roree was founded in the end of the tenth century of the Hijru, by a Lieutenant of Ukbur. The minaret of Meer Masoom at Sukhur, was raised about the same period, and is a heavy, ill-proportioned column, without ornament. The carving of a few tombs of Kalhora and Talpooree chiefs at Thatta and Hydrabad is worth examination, but the architecture is deficient in lightness and elegance.

The princes besides keeping dogs, wear their hair long, drink wine, and indulge in other practices forbidden to Moosulmans. They easily acquired a taste for the delicacies of Europe, and sent to the British bazar at Sukhur for Maraschino, Curaçoa, and Cherry brandy, which they pronounced deficient in strength, but superior in flavour to the fermented liquor prepared from the date. Among the articles they purchased, were telescopes, knives and forks, and white and coloured earthenware. Like their relatives of Hydurabad, they have adopted the doctrines of the Sheeas; though the largest portion of their subjects, both Belooch and Sindees, profess Sooneeism, which is the prevailing doctrine in Beloochistan, where a bitter feeling exists against the followers of Ulee. Though anxious to make converts whenever a pretext offers, they do not persecute the Hindoos for their faith, and I did not hear of their suffering cruelty and insult on that account. The Hindoo carefully avoids giving offence, and though not permitted to build temples and exercise his religion openly within the walls of towns, has usually a small place of worship in the suburbs; but he is forbidden to use music and bells, to blow the shell and fashion idols, and a little red paint alone indicates the situation of his gods.* The Hindoos visit the shrines of saints, and other places of Moosulman pilgrimage, which they have endowed with a sacred character. The Bhattees and Arores form the great body of Hindoos in Khyrpoor. The latter are the trading class, and nearly resemble in feature their brethren of Western India, from whence they originally emigrated, but are more neglectful of their dress and persons, and lax in the observance of their faith. They eat and drink of forbidden things, partake of food that has been touched by Moosulmans, and smoke from their pipes, and are held, consequently, in disrepute by the pure Hindoo of Muthoora and Bunarus. Only very poor Moosulmans ride upon donkeys; but they are kept commonly by Brahmuns and wealthy Hindoo merchants and bankers, who do not consider it a disgrace to mount an ass, while it is, on the contrary, regarded by a Moosulman as degrading. It is hardly necessary to state that the Hindoo of India cannot touch an ass without being defiled: to mount him upon one is to degrade him. The

* At Shikarpoor, there are many wealthy Hindoos, who have a Takoor Dwara (Temple to Vishnoo,) and three temples to Mahadeo beyond the town walls. They have idols, *Artees* and *Sunkhs*, and practice the observances of their faith unmolested. They say the privilege was obtained by a celebrated *Sadh*, who astonished the Moosulmans by his miracles. When they threatened to circumcise him, he turned their mosques away from Mecca, and his persecutors being alarmed at such conspicuous proof of his power, to get them righted permitted him to erect temples and worship the Deity in his own fashion. Tymoor, the son and successor of Ahmud Shah, first established Hindoos in the town, and the reason of the Ameers treating them with such indulgence, is owing to the benefits they confer on the country by their industry.

ass is introduced in Sind into marriage processions, and carries the bride and bridegroom. A great many Bhattees enter the service of government, and fill some of the most important and trust-worthy offices. They are treated with respect and consideration, but obliged, as the price of servitude, to conceal their caste, to wear beards, and adopt the dress and manners of their rulers. They fasten the collar of their *chola*, or shirt, on the left instead of the right side, which is the only difference in the costume of the rival sects. The mechanical arts and manufactures are conducted entirely by Moosulmans; but shopkeepers, and by far the greater part of the mercantile class are Hindoos, and cordially detest the Belooch. They are frugal, temperate, and industrious; their thoughts are directed exclusively to the acquisition of wealth, and I am inclined to think the exactions of their rulers not quite so burthensome as they represent. They are a great deal the richest members of the community, and contribute largely to the revenues of the country. Meer Roostum, it is said, makes scarcely any distinction between his Hindoo and Moosulman subjects, and is in this respect more tolerant than his father Sohrab Khan, who sought opportunities to convert them to Islam. During his reign, if a Hindoo was heard to speak lightly of the Moosulman creed, or to deny his own faith in jest, he was immediately circumcised. The law forbidding the Hindoo to exercise his religion should be abrogated; but in censuring the Talpoorees, we must not forget how recently the Jew was persecuted in the most civilized states of Europe, and that in the Punjab, and some Hindoo cities of western India, the Moosulman is not permitted to build mosques and call his brethren to prayer.

The government of Khyrpoor is a military despotism, and if the Ameers persist in their present arbitrary mode of raising revenue, they will shortly reduce the country to a desert. Moosulman and Hindoo are subject equally to extortion, though the last is, from the nature of his vocation, more frequently the sufferer. In their eagerness for wealth, the princes have permitted the forts and public works that rose under former rulers to fall into ruin, and trade and manufactures languish. The few who have wealth carefully conceal it, and assume an exterior of penury, to escape extortion. An irregular cess is levied from grain-dealers and shopkeepers, according to the means each is supposed to have of paying, and they are confined in the stocks and flogged if they withhold their quota. A sum varying from two to thirty rupees a shop was extorted in October 1839 from the grain-dealers at Sukhur, not a mile from the British camp. Before the arrival of our troops the dealers never exposed a quantity of grain on their counters, for fear it should be seized or plundered by the armed followers of the prince. They conducted business

in a small dark chamber behind their shops, but had latterly carried on their transactions openly, and were disappointed and alarmed when they found our civil and military officers were not authorised to protect them. Espionage is carried to an extraordinary length. The officers of the prince inform him when a merchant makes a successful speculation, and a mechanic a superior article, and he demands a share of their profits, which is regulated by no law, but by his own absolute will. The manufacturer is careless about improving his fabrics, from the little benefit he derives from his ingenuity. There are persons in every community who basely earn a livelihood by informing against their fellow citizens, and to this class the sovereign looks for information. Neighbour is against neighbour, and social intercourse destroyed, and each fears his associate will employ the knowledge he obtains of his affairs for some bad purpose. Under such a system it is not surprising that Sind exhibits the shadow of its former prosperity—that the revenues are decreasing, and yield a tithe of what an enlightened government would obtain from them. The advantage conferred by the Indus as a medium of communication with the ocean and Northern India and Central Asia is sacrificed. The skilful artificer departs to regions under a milder administration, where he reaps the profits of his industry. Useful arts are lost, and I witnessed the departure of weavers, dyers, and other industrious classes from their native towns, to escape the exactions of the governors. Many have relinquished trade, and prefer to live quietly on a little, than to amass a fortune which might tempt the cupidity of the government. The people are not inferior to their neighbours in talent, but it cannot develop itself under a withering despotism. Even the upper ranks are sunk in ignorance, and possess neither the mental acquirements, nor the polished manners of the Moosulman of India.

The laws are founded on the Koran, but corruptly administered, and an offender escapes punishment by bribing the judge. The poor have little chance of redress when their oppressor is a Suyud, or nobleman of the military class. Fines are levied on trifling prettexts, and whenever it is possible, the Hindoos settle their quarrels without an appeal to the governor, who, if a rigid Moosulman sometimes condemns one or both to circumcision. In general the punishments are not severe; life is seldom forfeited, and the principal Ameers alone exercise the power of life and death.

The revenue of the territory under the Ameers of Khyrpoor, including the purgunnah of Moghulee, Boordgah, and Keen, is computed at twelve lacks of rupees, of which Khyrpoor yields perhaps eight lacks. The Ameers obtain part of their land revenue from the farmer in grain, and part in money, regulated by the nature of the soil, and its proximity to

water. The rate is usually a third and fourth of the produce of wet land, and a fifth of irrigated land. They frequently alter the amount of the cess in kind in *Moghulee*, from caprice rather than the failure or productiveness of the crops; this was not usual with the Moghul and Afghan sovereigns.

Land in Khyrpoor is classed under three heads,—*Bosee* or *Belo*,* *Puko* or *Pirjain*,† and *Nohur*. The *Bosee* lies on the banks of rivers and canals, or it is flooded annually by the Indus, and requires no aid from the water wheel. The *Puko* is at a distance from water, and requires to be irrigated. *Nohur*, or waste land, is taxed at different rates, according to the obstacles it presents to agriculture. In the district of *Rosee*, *Meer Roostum* takes one-fifth of the produce the first year, and levies the full cess the season following. *Meer Mooreed Hydur*, who has a manor in the same district, taxes waste land the first year it is tilled one rupee the jureb, the second year two rupees, and so on, increasing one rupee yearly till the assessment reaches its maximum. In parts of Khyrpoor where there is an uncertain supply of water, crops are valued when ripe by a government officer, who levies according to the productiveness of the harvest. The landholder sometimes gathers the crops without the officer, but if he removes a sheaf before the prince has taken his portion, he is fined double the amount of his assessment. The value of land is extremely low. Wet land in the district of *Sukhur* is worth seven and eight rupees a jureb, and dry land four and five rupees. A landholder of my acquaintance paid 300 rupees, eight years ago, for thirty jurebs of land, but it is worth more than the average, from its proximity to the Indus, and town of *Sukhur*, where there is a better market for produce than the interior of the country. Garden land on the banks of streams, sells at from twenty to fifty rupees the jureb, according to the number and description of trees it contains. The mango yields the best return. The government, however, leave only a sixteenth of the produce of gardens to the proprietor, and the only fruits exempt from cess, are the *Hubsora* (*Cordia myxa*), the Plantain, and *Jummo* (*Eugenia jambos*.)

The revenues and town duties are frequently farmed out by the year to *Izardars*, who appoint collectors on a fixed salary, one to every large village, and one to a circle of small ones. In *Sukhur* the monthly stipend of these functionaries varies from 5 to 30 rupees. The *Izardars*, or farmers, are either *Moosulmans* or *Hindoos* (*Bhattacs*), and are compelled to fulfil their engagements, and well beaten if they withhold payment. As the settlements are seldom for more than a year, they cannot, like the revenue farmer in some parts of British India, make their profits in a

* Pers. Silabee. † Khooshkdako.

good season cover their loss in a bad one. To the Rueeyuts both systems are the same, and he must pay under all circumstances the full assessment. In Khyrpoor he is often grievously oppressed by the farmer, who thus indemnifies himself for sums extorted by the prince. The prince appoints an officer, called a Darogha, to exercise a surveillance over the Izardar, and examine his accounts. He usually receives a monthly stipend of thirty or forty rupees, and it is through him that the prince ascertains the receipts from a district, and regulates his demands against it the following year.

Zumeendars hire labourers to till their lands, and let a portion of it to tenants for rent or part of the produce, and they usually receive from their landlord seed and agricultural implements. The lease seldom extends beyond a year, and the Zumeendar, after setting aside a third or a fourth of the crop for government, divides the remainder into four parts, three of which he gives to his tenant. The tenants often pay in kind to the landlord, and he settles with the government in cash. In the district of Syudabad of Moghulee, under Meer Roostum, they pay a third of the crop to government, and a sixteenth to the landlord, but provide seed and agricultural implements, and bear all charges of cultivation. The prince also lets his land to tenants, and relinquishes half the crop to them for the trouble and expense of cultivation. A similar system obtains in a great part of France and Savoy. The *Métayer* of France pays half the produce to the proprietor as rent. The proprietor supplies the stock, the grain required for the first sowing, as well as for the support of the *Métayer* and his family until the first harvest. The *Métayer* works, sows, reaps; and he and his family feed on the produce, after which the proprietor gets the remainder, (see *Revenue Trimestrielle* for April, 1828.) In the lowlands of Savoy the *Granger* (another word for *Métayer*) pays half the produce of his farm to the proprietor, mostly in kind.

There is a great deal of land in Khyrpoor subtracted from the revenues for *jageers* to military chiefs and their followers. When the Talpoorees conquered the country, they respected, as Asiatic princes usually do, the *sunnuds*, or title deeds of sovereigns, who preceded them. There are Suyuds, Puthans, and Moghuls in the purgunnah of Moghulee, who have *sunnuds* granted by Ourungzeeb, Nadir Shah, and the kings of Kabul to their ancestors, for services to the state, in virtue of which they pay only a fourth of the crop and the whole of their *ung* is remitted. Persons of this class without *sunnuds*, pay a half of the crop and half the established *ung*.

Some families of Sindee Zumeendars in Khyrpoor, whose ancestors were converted to Islamism ages ago by the Arabs, hold their estates rent free; a number of Suyuds enjoy the same immunity, and many more receive pensions. Provision is also made for the *Durgah*, and shrines of holy men,

which shelter a host of lazy *Moojawurs*, who besides the allowance they derive from government, are otherwise a burthen on the people.

Sales of land are rather frequent, and the law compels a proprietor before he disposes of his estate to a stranger, to signify his intention to his neighbours whose property adjoins. If they all decline to purchase at the price offered by the stranger, the proprietor concludes the bargain, and presents him with a title deed, signed by the neighbours, to prevent any one disputing his claim hereafter.

Grain is trodden from the husk, out of doors, by six and eight oxen abreast, and beaten afterwards with sticks to remove what particles remain in the ear. It is winnowed in small shovel-shaped baskets of *moonj* grass, and removed from the field on carts or boats. The process of agriculture is cheap and slovenly, and two and three kinds of grain, and grain and vegetables, are mixed in the same field. The Ameers let their land to tenants by the year, and it is in a worse state than that of the farmer, who superintends his land himself. Tamarisk stumps half burnt encumber the fields, which are seldom weeded after the grain appears. The cuts from the Indus are narrow, crooked, and carelessly dug, and the earth constantly falls back into the cavities, and the peasant has to do his work again.

Cattle sheds are built of reeds and tamarisk boughs, which are an imperfect protection from the weather. There are no mangers and troughs to receive fodder, which is scattered about, trodden under foot, and much of it wasted.

In the Purgunnah of Moghulee, labourers who cut wheat, gram, sesamum, mustard, &c., receive two *patees*, or *pinkees** daily of the grain they reap, and their labours commence early, and terminate at noon, as it is impossible to work later in summer, from the intense heat. The payment is always in winnowed grain at the end of harvest. Women are not employed to reap corn and sugar-cane. Joowaree and Bajree, are reaped in November, and the labourer works from sunrise till sunset, and earns three *patees* or *pinkees* of grain; a woman only half the quantity. For cutting rice, the remuneration is two or three *pinkees* per diem. For sugar-cane two annas (3*d.*) a day, and five or six *pys* (2½*d.*) for hemp and tobacco; women earn only half the sum. The farmer divides the pea harvest into seven portions, two of which he gives to the reaper. Sometimes the Zumeendar gives servants, permanently in his employ, one-fourth of his share of the crop, which seems a better mode of remuneration than fixed wages, as it closely allies their interest with his own, and they gain and lose in proportion.

* A Pinkee is rather more than $\frac{3}{4}$ of a seer, and two Patees equal 1½ seer.

The Ameers deal extensively in grain, which they horde and bring into the market when a scarcity occurs, either from a failure of the inundations, or the demands of levies in war time. Meer Roostum instead of alleviating the distress of his subjects, and thwarting the combinations of grain merchants, helps to raise the prices, and imitating Moohummud Alee in Egypt, buys up and monopolizes the produce of his country.

The following were the common rates of land assessment in the district of Roree on the north bank of the Indus,* for the harvest year 1250-51 corresponding with A.H. 1255 and A.D. 1839, levied in the Khyrpoor currency.

Rubbee Harvest.

Rs. As.

Tobacco,	<i>per jureb,</i>	6	4
Opium,	—————	6	0
Wheat,	—————	4	14
Khiyar, Khonbee, or Masfur,	—————	4	12
Hemp, Cucumbers, Water and Musk Melons,	—————	4	10
Barley,	—————	4	0
Ekura or Shumleet, a kind of Spinach,	—————	3	14
Paluk, a kind of Spinach, Onions, the Egg plant,	—————	3	12
Keenu or Urzun, a kind of Millet,	—————	3	4
Surshuf mustard (which is also collected in kind) gar- lic, cummin, anise and Wadsh or Badiyanu,	—————	3	0
Surshuf or Sirson, Moong (<i>Phaseolus mungo</i>), Jan or Ujmood, and Pease (<i>Ruwa</i>), are collected in kind, (<i>bhutaee</i>) at the rate of a third of the produce per jureb of wet land.			

Khureef Harvest.

Rs. As.

Sugar-cane,	<i>per jureb,</i>	10	8½
Cotton,	—————	4	12
Joowara (large maize) carrots, turnips, radishes, Toore, (a kind of cucumber) Eroun, pumpkin, Kurela, a vege- table, (<i>Momordica charantia</i>), and Mehra, another kind of vegetable,	—————	4	8

The following pay in kind, a third if grown upon land flooded by the Indus, and if irrigated by the wheel, only a fourth.—Rice, Bajra (*Holcus spicatus*), Indigo,

* The harvest year terminates in the middle of the year of Higma.

Mash, a kind of vetch (*Phaseolus max*,) Musoor (*Ervum lens*,) Sesamum, Sure (*Panicum italicum*,) and Chunna (*Cicer arietinum*.)

Land revenue of the district of Sukhur, on the south bank of the Indus for A.D. 1839 :—

Rubbee Harvest.

	<i>Rs.</i>	<i>As.</i>
Tobaeco, Hemp, Onions, Cucumbers, per jureb,	5	4
Wheat, Joowaree, Cotton, Bajree, Moong, Pease, Gram, Ujwain, Gushneez, Surshuf, and Sesamum, are assessed in kind, at one-fourth of the erop per jureb of wet land.		

Khureef Harvest.

	<i>Rs.</i>	<i>As.</i>
Sugar-cane,... .. per jureb,	9	4
Carrots, ————	4	4
Turnips and Radishes, ————	3	4

The land revenue is calculated in Khurwars and Kasus, and a Zumeendar on paying the dues to the Kardar, or governor, imprints his signet ring on the officer's book, at the foot of his account, as security against mistakes and imposition hereafter.*

Table of Khyrpoor, or Shuhzadpoor, measures used in Khyrpoor and the purgunnah of Moghulee :—

4 Chouthaee, or 2½ Pa,	... ..	1 Patee or Patoee.
5 Chouthaee, or 3 Pa and ½ Ana,	...	1 Pinkee.
4 Patee, or 2½ Seers,	... ..	1 Toyn.
4 Toyan, or 10 Seers,	... ..	1 Kasu.
6 Kasu, or 1½ Mun,	... ..	1 Tokhu.
10 Tokhu, or 15 Muns,	... ..	1 Khurwar.

Weights and measures used in the districts of Roree and Sukhur, the lesser for precious metals, &c., and the rest for grain, oil, ghee, and other commodities. The small weights vary a trifle in some parts of the country.

* The entry in the Kardar's book is as follows :—

(Zumeendar's name.)

Wheat, 4 Khurwar.
Government share 2 Khurwar.
Zumeendar's share 2 Khurwar.
Government ung 6 Kasu.
Zumeendar's ung 1½ Kasu.

8	Ruttee,...	...	...	...	1 Mashu.
11½	Mashu,...	...	...	...	1 Sohrab, or Kyrpoor rupee.
42	Mashu,...	...	...	...	1 Tola.
6	Tolas, ...	...	...	...	1 Ana.
4	Anas, or Chhutanks, ...	...	...	...	1 Pa, or 24 rupees.
4	Pa, ...	...	...	...	1 Seer, or 96 Sohrab rupees.
40	Scers, ...	...	...	...	1 Mun (pukka.)
15	Muns, ...	...	...	...	1 Khurwar.
5	Seers, ...	...	...	...	1 Dhura.
8	Dhura, ...	...	...	...	1 Mun.

Land is measured by the cubit (Bootu,) Gundha, and Jureb.

5 Cubits make 1 Gundha.

20 Gundha 1 Jureb.

There are three kinds of Jureb. The first is measured by the Shahjuhanee gundha, and about 150 English feet square. The second measured by the Ruyutee gundha (the one in common use) 145 feet square, and the third measured by the Imdadee gundha, only 135 feet.

The Khyrpoor cubit is employed to measure land, and is the same length as that of India, or about 18 inches; it is measured from the point of the elbow to the tip of the middle finger.

The Shahzadpoor cubit takes its name from a town in Beloochistan, the birth-place of the Talpoorees, and is a measure extending from the point of the elbow, over the tip of the middle finger, to the setting on of the wrist, or about 26 inches. It is used to measure boats, cloth, &c.

The Shahjuhanee gundha is employed in the purchase and sale of land, and consists properly of five Shahjuhanee cubits ($7\frac{1}{2}$ feet); but the Talpoorees, to increase their revenues, have shortened it about three inches, by measuring four cubits only in the regular manner, and the fifth to the setting on of the little finger. This is the Ruyutee gundha.

The Imdadee Gundha is applied to *Inam* lands, and consists of five cubits, measured from the point of the elbow to the tips of the four fingers and thumb, equal to about 7 feet.

A few gold coins (Ushrufee) from India, find their way into the great markets, and pass for more than their value. Among them are the Pootlee, Gunga Ramee, Ukbur Shahee, Moohumud Shahee, and Sher Shahee.

The silver coins in circulation are:—

The Sohrab rupee, in which the assessment is calculated, struck at Khyrpoor in the name of the late Muhmood Shah of Kabul, and worth nearly one per cent. less than the New Company's Rupee.

The Koree, or Hydurabad rupee, in which pensions are sometimes paid, worth only 12 anas, or 25 per cent. less than the New Company's rupee.

When the British army arrived in Upper Sind, the people refused the New Company's rupee in payments for goods and labour, but prefer it now to their own coin, which it threatens to supersede. The Company's rupee stamped with the head of the late William IV. is worth one per cent. more than the Company's rupee without his head.

The Sohrab Rupee is divided into fractional parts, corresponding with those of the Company's rupee in Northern India, as exhibited in the following tables :

<i>Sind Coin.</i>		<i>Indian Coin.</i>	
6 to 12 Kourees	1 Udhree.	6 Kourees	1 Tolee.
2 Udhrees	1 Dumree.	2 Tolees	1 Dumree
2 Dumrees	1 Kuseera.	2 Dumrees	1 Chhudam
2 Kuseere	1 Udhela.	2 Chhudam	1 Udhela
2 Udhele	1 Pysa.	2 Udhele	1 Pysa
3 Pyse and 1 Kuseera }	1 Ana.	3 Pyse and 2 Chhudam }	1 Ana
2 Pyse	1 Tukka.	2 Pyse	1 Tukka
51 Pyse	1 Sohrab Rupee		

The implements of husbandry in Khyrpoor are cheap, and simple in their construction ; and even the poorest peasant has a plough, but sometimes hires bullocks to work it. The daily hire of a pair of oxen for agriculture is about the same every where, viz. four tukke, and the driver gets five pys, or an equivalent in grain, and is not allowed to be absent at noon to dine and repose. Two oxen are hired for a plough, or Persian wheel, from dawn till sunset, for six or eight tukke, and relieved at noon. Two pair will till a jureb of land in a day. The hire of a harrow (Sahur), including the services of two men to guide, and four bullocks to drag it, is one rupee per day, and half the sum if discharged at mid-day.

A plough, including a yoke for a pair of oxen, costs 18 tukke, or about 16*d.* English, half of which goes for labour. The items are as follow :—

	<i>Tukke.</i>				
The yoke (Punjarec)	2
The handle (Koor) 3½ feet long	5
The shaft (Huriyn) 9 feet long	5
The share (Choonee)	6
Total,					18

The wood is acacia and other common forest timber. The share is about eighteen inches long, eight inches of which slide into a groove at the foot of the handle ; it is shod with a thin plate of iron, five inches long,

and weighs a quarter of a seer; but where the soil is sandy the plates are only half the length, and cost three tukke. The iron is of an inferior kind, and badly hammered, but strong enough to penetrate light and moist soils, and there are no stones on the lowlands to impede the farmer's labour.

The harrow is either a circular or flat beam of heavy wood roughly shaped with the axe, and costs one rupee. It measures about eight feet long, twelve inches wide, and six deep, and is drawn by four bullocks harnessed to ropes.

For digging fields, wells, and canals, the people use a large iron hoe with a handle two feet long, which costs two rupees. The iron weighs two seers, and is beaten into a surface twelve inches long and nine wide. This and the common axe are used to clear waste land; the pick-axe is unknown. Burnt sticks and grass are almost the only materials used for manure.

The peasant weeds his land with a *Rumbo*, or broad chisel of iron, similar to the *Khoorpu* used in India to dig the roots of grass. It costs either two anas or two tukke. The reaping hook is filled with small sharp teeth set edgewise, and costs two anas. A wooden fork of five or six prongs, two feet long, is used to collect the stalks of grain and briars for hedges.

The other articles that remain to be noticed are, a square basket to hold grain and food for cattle, fabricated by sweepers (Shekhree) of the stalk of moonj grass, and sold at two tukke each; two or three shallow baskets, shaped like an English dust-shovel, for winnowing grain, made of the same material as the above, and worth an ana each; and a small wooden rake and hoe for collecting the seed and grain stalks, worth together about two tukke.

Water is raised to irrigate land by the Persian wheel, worked by one or two oxen, or a camel, blindfolded, to prevent their shying; and a rude awning of boughs is built over the well to screen the driver from the sun. Sometimes the charge of the cattle is delegated to a woman, who sits like the man behind the yoke, with her legs doubled up, and urges forward the sluggish animals with a shrill cry and a whip of tamarisk twigs.

There are sometimes a dozen wells on a farm, and the same results might be obtained from half the number properly managed. The *Lut*, or beam, that connects the wheels with the ladder, is laid on the ground instead of under it, which subjects it to friction, and retards the bullocks who step over it at each revolution. Hemp and moonj rope are rarely procurable in the hamlets, and the peasant fastens the water jars to the ladder with flags and date leaves, which he gathers and twists himself. They are constantly broken and displaced by the loosening of the ties, and jars are seldom at hand to supply deficiencies. The narrow broken troughs which conduct water to the fields allow much of it to escape, and another

evil is the encroachment of the river, which undermines the scaffolding of the wheel, and compels the farmer to remove it to a new site.

A pair of bullocks perform a revolution in 15 or 18 seconds. A ladder holds thirty jars, each containing from $2\frac{1}{2}$ to 3 quarts of water. On an average they reach the top of a well three parts full, and an eighth of their contents is lost from defects in the troughs and machinery. The discharge per minute never exceeds fifty or sixty gallons.

A Persian wheel cannot usually be set in motion for less than sixty rupees. The machinery is worth about twenty-five, but in districts where wood is plenty and cut on the estate, it can be made for sixteen or twenty rupees; the earth pots for raising water cost two rupees a hundred, and a pair of bullocks thirty rupees.

The cost of a wheel in the districts of Roree and Sukhur is as follows:—

	<i>Rs. The.</i>	
The two wheels (<i>chukur</i>) which revolve at right angles,	15	0
(Where wood is plentiful 10 and 12 rupees.)		
The <i>kanjur</i> , a cross beam eighteen feet long, raised seven feet from the ground on the trunks of date trees. It receives the pivot of the horizontal wheel, and the oxen pass beneath it, ...	2	0
The driver's seat (<i>guddee</i>) a plank ten feet long fixed to the pivot, and inclined downwards,	1	4
The <i>lut</i> , a circular beam resting on the ground, and connecting the vertical wheel with the <i>ba-ir</i> , which it helps to support	2	3
The <i>ba-ir</i> or water wheel, about $3\frac{1}{4}$ feet wide, and 6 feet in diameter. A ladder (<i>mal</i>) made of date leaves, passes over it and holds from thirty to forty earthen pots (<i>keengur</i> .) A principal defect of the wheel might be cured by making the jars thicker, and glazing them, which would prevent the water escaping through the pores, and by separating the jars by a band of rope or mat, the breakage that constantly occurs by their falling on each other would be prevented.		
The <i>parch</i> , or trough, five feet long, made of half the hollow trunk of a date tree, to receive the water from the pots,	0	13
The <i>nesur</i> , a second trough of date wood twelve feet long, which conducts the water from the <i>parch</i> to the field.	1	0
In addition to the above there are six timbers which support the troughs and water wheel.		
The machinery is entirely wood, and those parts of which I have omitted the cost, are cut in the farm or forest by servants or hired labourers, and shaped free of charge by the carpenter who contracts to repair the wheel.		
The hire of men to cut the wood is about.	1	5

The farmer usually contracts with a potter by the year to supply his wells with pots, and remunerates him with a share of the crop. A Zumeendar of an ancient Mogul family who owns 140 jurebs of land at Sukhur, pays the potter as follows :—

For every well in a sugar field, two rupees and seven tukke, and one seer of goor (molasses) per jureb at each harvest. The same for a jureb of cotton and tobacco, excepting that he gives a seer of dry tobacco and uncleaned cotton, instead of goor.

For a well in fields of wheat and joowaree, without reference to the number of jurebs, seven tukke and twenty-five seers of grain each harvest. For these sums the potter also supplies the Zumeendar with pots for domestic use.

The length of the well-ladder, and number of pots, depends of course on the distance the water is lifted. The pots are a few inches apart, and if a well is constantly worked, are replaced six or seven times in a year.

The carpenter contracts for a well on the same terms as the potter, and repairs the machinery each harvest for two rupees and seven tukke, and a seer of grain, or whatever is grown on the farm.

The cost of digging a cut or well (*kookh*) is five rupees in the Rubbee harvest, and two in the Khureef. The rise of the Indus makes the difference in favour of the last, and often renders a shaft unnecessary. None of the wells in Khyrpoor are faced with masonry, and when the soil is light and liable to injury, a well is sometimes re-made four times in a year: it is impossible to repair an inroad of the river, and the farmer always removes the wheel to a fresh site.

A pair of well-bullocks cost rupees 30, a very fine pair rupees 40, and an indifferent pair 15. Two pair will keep a wheel in motion from daylight till dusk, and are relieved at noon. Where a farm has only one well, it is worked all night, summer and winter, and the water jars are renewed every month. In Daodpootra three pair of bullocks are employed on a well in the day, and the same number at night. In the Delhi territory, and other parts of Northern India, bullocks are never worked at night;* a pair labour all day and are allowed an hour or two at noon to feed and repose. They are stronger and better fed than those on the banks of the Indus, and the labour of lifting water is less constant and severe in the Indian wells than Persian wheel, but the discharge of water is only one half. The peasants of Hindoostan give their labouring cattle oil cake and $1\frac{1}{4}$ seer of *urhur* (pulse or barley) a day; or

* I have however frequently observed the contrary with sugar lands in the upper Doab.

double the quantity of cotton seed. Cattle on the banks of the Indus are subsisted on grain stalks.

The bullock-driver in Khyrpore gets five pys a day, and a boy only three pys (10 shillings, and 3s. 5d. a month). He works from morning till night, and eats his meals when he can, and frequently falls a sleep from fatigue, in his master's absence. Some Zumeendars hire bullocks for wells at two tukkes each per diem.

A tenant pays his landlord six rupees a harvest for the use of a wheel, calculated as follows :—

	<i>Rs.</i>	<i>As.</i>
The two wheels (<i>chukur</i>),	4	0
The Kanjur,	0	8
The Lut,	0	8
The Driver's seat,	0	4
The Parch trough,	0	4
The Nesur trough,	0	8
	6	0

The tenant is at the charge of feeding and keeping the bullocks, and in some instances repairs the wheel.

The small quantity of rain that falls in Sind, makes it almost needless to store grain. The farmer heaps it in the air in a high and dry situation, digs a trench round it, to drain off rain, and covers it with two or three layers of mats made of *gondlee*, a kind of reed. He adds a compost of clay and chaff, which he beats into a cake, and smooths with his hands. A heap (*pulle*) plastered with cow-dung, will bear the weight of a horseman, and lasts several years. I saw their power to resist water at Sukhur in July 1839, where some heaps were exposed to remarkably heavy rain for two days without suffering injury.

The peasants of Moghulee purgunnah, where date trees are plentiful, cover their grain with mats made of the leaves, and to give additional strength to the heaps, sometimes put a second covering of mats of the peel of *moonj* grass, and over them one or two coats of clay and chopped straw. Grain is thus preserved in situations where there are no means of transporting it to the markets, and on the banks of rivers and canals where the people inhabit temporary huts. But the farmer transports his grain, whenever it is possible, to the mud floor of his cottage, which is smeared with cow-dung, but has neither mats nor carpet, and spreads it in the sun, five or six times a year to expel the weevils which would otherwise destroy it in a few months. Wheat, rice, chunna (*Cicer arietinum*), bajra (*Holcus spicatus*) and moong (*Phaseolus mungo*) will keep in

the air for three years, but the heaps are opened once in twelve months to preserve them from insects. Joowarce (maize) and pease are more liable to be injured by weevil than wheat, and will not keep beyond twelve or eighteen months in the air.

Grain is also preserved out of doors in circular jars (*goondee*) of sun-dried earth, capable of holding from eighty to twelve hundred pounds, and taken out once a year, through a hole near the bottom of the jar, and exposed a few days in the sun. A small quantity is kept in houses for daily use in jars of sun-baked earth.

Khyrpoor produces all the grains and pulse common to India. Wheat and joowaree are the staple, and belong to different harvests, and are consumed in nearly equal quantities. The district of Roopa in Moghulee, produces fine crops of joowaree and barley, and bajree and moong are next to these the most common graius. Roree and Sukhur produce rice, but Chandkoh, and the country south of it, yield the largest quantity of any district in north Sind. Chunna (gram) is collected in kind. The land owners usually reserve their share of the crop for their cattle, and all that finds its way to the market belongs to government. Indigo is chiefly grown in the districts of Kyrpoor and Oobaro, and is the only dye used by the lower classes for their trowsers and turbans. It is inferior in quality to that of Bengal, but considerably cheaper. Sukhur and the village of Kundura, four kos from Roree, are considered to produce tobacco equal in quality to any in the province, but it undergoes no preparation beyond exposure to the sun, and is dry and distasteful to the native of India. Gotkee is famed for the quality of its opium, which fetches double the price of that raised at Shikarpoor and elsewhere. The sugar-cane of the villages of Ubdo and Napur, between Sukhur and Shikarpoor, has an excellent character, and it is cultivated pretty generally throughout the province, but is inferior to the produce of northern India and the Punjab. Sugar-candy of an impure colour is manufactured at Khyrpoor and Roree. Large quantities of poppy and garlic are grown at the Biriya Loh in the district of Khyrpoor, and hemp at Sukhur and elsewhere. Plenty of good cotton is raised in the northern part of Khyrpoor, and in the little district of Shahbello, two kos north of Sukhur. It is one of the most important products, and supplies the inhabitants with clothing. Looms are established in all the principal places, but the quantity grown is not equal to the demand, and a good deal of the raw and manufactured material is imported.

Dry land (*puko*) intended to receive cotton, is watered before ploughing, and every four or five days afterwards till the crop is gathered. Wet land (*bosee*) is not irrigated, and the plough is passed over it three or four times,

and five and six times over *puko* land. A square beam of heavy wood serves for a harrow, and is drawn over the last as often as the plough, but *bosee* is only harrowed twice. The farmers of Moghulee purgunnah never manure land, but weed it when the sprout is a span high, and again when it has reached the height of four feet, at the same time they move the soil with a hoe, and throw it up round the roots to nourish and give them vigour. The seed is sown in April, and the produce gathered in July. The plant is often left in wet land till the following year, and yields a second crop in May. It is generally of inferior quality to the produce of India, but better than that of lower Sind. The gathering season lasts altogether three months, but reapers attend only once or twice a week, as the pods do not open in sufficient numbers to require their presence oftener. The crop depends on the swell of the river. A jureb of *bosee* land yields five muns of clean cotton, and a return of forty rupees after paying all expenses: after deducting from this the government tax, amounting to a fourth, it reduces the net profit of the cultivator to thirty rupees. Dry land yields two and a half muns of cotton per jureb, and return of thirty rupees after deducting the cost of labour, but government take a fifth, and leave the cultivator twenty-five rupees. Black soil is scarce, and considered rather better for cotton than *puko* land. It requires to be constantly watered, and yields about two muns of clean cotton per jureb, seldom three muns. *Bosee* cotton with seeds in it loses two parts in cleaning, and *puko* cotton one-third, but their quality and price are the same. Three and three and half seers were sold in 1838 for a rupee, and three seers in 1839, but a sixth less if a purchaser took the pick of the warehouse. From twenty to twenty-five seers of seed (*wounuk*) sold for the same money. Labourers in cotton fields get an eighth or ninth of what they collect, which is a good plan to stimulate their exertions. Some farmers give them only a sixth of the harvest after the first gathering.

There are a great variety of greens and spinach, and among the herbs eaten as vegetables that grow spontaneously, are purslain, and a species of amaranthus. The gardens produce carrots, turnips, radishes, onions, cucumbers, and several kinds of pumpkins, the egg-plant (*bangun*), three kinds of bean, pease, kurela (*Momordica*), turnee, and mujoon, or dil pusund. The leaves of the carrot, mustard, and pea (until the pulse forms) are eaten, and the root of the lotus (*Neerapur*), which covers the lakes and marshes. Sesamum, capsicum, garlic, and turmeric abound, and the last is used as a dye. Among the varieties of spinach are chooka, pullee, thoon, mohra, loonuk, mureera, methee, paluk, and the leaves of the ekra tree.

The fruits are—the date, mango, plantain, pomegranate, apple, grape, lime, citron, fig, apricot, water and musk melon, pistachio, and keora

nuts, several kinds of wild plum, the tamarind, &c. Khyrpoor produces two kinds of pomegranate: the best is full of large, white, juicy seeds, and grows abundantly in the gardens of Roree, and at Ghotkee in north Khyrpoor. The other kind is made into an acid shurbut, and the seeds are dried and sold to poor people who cannot afford to purchase mangoes, and form pickle with the addition of salt, dhuniyu, capsicums, and coconuts. Unripe grapes are used for the same purpose. The flowers of pomegranate are employed to dye leather for shoes and water bags. A refreshing beverage is prepared from Keora flowers. The grape of Khyrpoor is small and acid, and the only good kind procurable in the country comes from Kabul and Persia. The apricots are small, hard, and insipid, and the apples are a little bigger than crab apples, and rather less acid.

Khyrpoor yields plenty of dates, and they form part of the food of the lower classes, who obtain a strong spirit from the juice by distillation. By far the largest quantity are at Shikarpoor and Bukur. The gardens on the banks of the Indus at Bukur, and several miles below it, are a delightful relief to the eye after the endless tamarisk woods of the lower Indus, and rival the coconut groves of Bengal in beauty of foliage. The fruit is, however, very inferior in size and flavour to the Arabian and Egyptian date, though it surpasses the spurious kind of Northern India. The tree emits, after rain, a disagreeable smell, and the leaves that fall into water change its colour in a few hours to a deep green, like that of a stagnant pool, and are said to render it poisonous. The *Kiya*, a reddish coloured maggot, about half an inch long, is born in the tree, and destroys the fruit; the people apply fire to the outer crust of the stem, which is about three quarters of an inch thick, and burn the coronet of leaves, where the insects breed. This severe treatment is seldom fatal to a tree situated in good soil: the leaves appear in about a month, and fruit in the usual course, and the tree is cut down if it does not recover soon after the period mentioned. The date is not irrigated, but low situations on the banks of rivers where the floods deposit a rich clay and fine loam are most favourable to its growth, and not one in a hundred trees that are burnt perish, but from five to ten per cent. in sterile soils. If rain falls on the date when nearly ripe, it completely destroys the flavour, which happened in 1839. The harvest begins about the middle of June, and terminates from the seventh to the fifteenth of August, when the people consider the hot season at an end, and the weather becomes perceptibly cooler.

Dates are of four kinds, distinguished by their colour, shape, and flavour: one is a pale yellow, a second a dark brown, a third light purple, and a fourth a deep purple hue. The brown kind is the largest and best. The

wholesale price in Roree of a mun of prime quality at hārvest time is two rupees, but one, and even two muns of inferior dates are sold for half the money. From Rs. $1\frac{3}{4}$ to $2\frac{1}{4}$ are usually paid for a mun in the bazar during harvest, but the price doubles after they are dried and pressed, and advances progressively. At Shikarpoor they are more plentiful than at Roree, and sell for about half the price.

The date is extremely heating if eaten in any quantity. Five or six days exposure to a bright sun are sufficient to dry them, and the peasants remove them to their huts in circular baskets (*pinda*) made of date leaves or tamarisk boughs, each containing about forty-five seers, and tread them into a solid mass. The fruit will not keep beyond twelve months, in consequence of the ravages of small maggots, called *kiya* and *soosra*.

The date is raised from seed, and sends forth many shoots from the foot of the stem. July and August are the best season for sowing seed, but it is put in the ground as late as October, and springs up in about a month. The tree bears fruit the third year in good moist land, but takes four or five years to come to maturity in salt sterile soils. A fine tree favourably situated, yields sometimes three muns of fruit, which is the maximum; a bad one not a third of the quantity; a jureb containing from eighty to a hundred trees, yields, on an average, a return of 320 rupees, but government only leave the cultivator 20 rupees, or 1-16th, and levy a duty of twenty pys on every mun of fruit exported to foreign countries, and carried for sale to other parts of Khyrpoor.

The people assert there are trees at Sukhur and Rooree two hundred years old, but probably no part of the original stems remain; they use the wood for door-posts, pillars, and water wheels, but never in the roofs of houses. Insects destroy the core, leaving it to appearance, perfectly sound, and it is not considered to last beyond five, or at the most, eight years. The English at Sukhur, either from ignorance of this circumstance, or the difficulty of procuring timber suitable for building, have converted the date into rafters. Trees are felled only when they give bad fruit, or have done bearing, and are worth from six to thirty anas, according to size.

(*To be continued.*)

A cursory Notice of Nayakote. By B. H. HODGSON, Esq. Resident at the Court of Nepal.

Nayakote, or the hither Nayakote as it is often called, to distinguish it from Nayakote of the Choubisi, is the name of a petty town and district lying WNW. seventeen miles from Cathmandoo, by the high road to Gorkha. The town (so to speak) is situated at the northern extremity of the district, upon a spur descending south-westerly from mount Dhaibung, or Jebjibiar, at about a mile distant from the river Trisool on the west, and the same from the river Tadi, or Surajmatti, on the south and east. The town consists of from 60 to 100 pukka three-storied houses, in the Chinese style of Cathmandoo, chiefly owned by the court and chiefs; of a durbar, called the upper, to distinguish it from the lower one on the banks of the Tadi, and of a temple to Bhairavi, all in the like style of architecture. The town forms only a single street, lying in an indentation on the crest of the ridge, and is consequently not visible from below on any side, though the durbar and temple, from being placed higher, are so partially. Nayakote, up to the late war with the English, was the winter residence of the present dynasty of Nepal: but as the situation of the town is bleak and uncomfortable at that season, the court and chiefs then usually resided in mansions still standing at the base of the hill towards the Tadi, but now a good deal dilapidated like the town residences, owing to the court having been stationary at Cathmandoo since 1813. The district, like the edifices of the great, bears marks of neglect, which are the more palpable by reason of a considerable portion of it being devoted to gardens and orchards, the property in a great measure of the owners of those edifices. The elevation of the town above the level of the Trisool must be from 800 to 1,000 feet, and the effect of this elevation in concealing it is aided on the side towards the Tadi by a fine forest of saul trees occupying the whole declivity. On other aspects the saul trees, inherent to the whole site, are reduced to scrubby brush-wood by perpetual injudicious cutting and defoliation, the leaves being used as plates to eat from, and being perpetually carried to Cathmandoo for sale there. This ridge has a soil of a deep red clay, and its general form is rounded, but broken by deep ruts and ravines in most directions. Towards the Trisool west, and towards the Tadi south and

east, the declivity of the ridge of Nayakote is precipitous ; but towards the junction of the two streams, in a south-westerly direction, the hill falls off more gently, and about a mile and a half below the town, spreads into an undulating plain, which occupies almost the whole space between the rivers to their junction, and the ridge on which the town stands. This tract may be represented as a nearly equilateral triangle, two of the sides of which are formed by the rivers, and the third by the ridge. This triangle is a plain, exclusive of the declining spur of the ridge—and is an *elevated* plain, exclusive of that north-easterly angle lying on either side the Tadi, towards, and to its junction with the Sindhu at the base of Bhaloo Danra. This north-east corner is on the level of the rivers, the rest are variously from 1 to 400 feet above their level ; and together they constitute the chief part and body, as it were, of the lowland district of Nayakote, the rest, or legs (so to speak with some aptness) of the district, being the glens of the Tadi and of the Sindhu as far upwards, respectively, as the confluence of the Likhoo, and the base of Burmandee. The mountain ridges enclosing the district of Nayakote, as above defined, are, beginning with the Nayakote ridge itself, and circling east back again to it—Maha Mandal, Nerja (north of Tadi), Kabilas (dividing the Tadi and the Likhoo), Bhaloo (dividing the Likhoo and the Sindhu), Dang-mai or Burmandee, Madompoor, and Ghoor (enclosing the glen of the Sindhu on the south), Belkote (carrying on the same southern barrier down the Tadi to Devi Ghaut), Jhilitoong (below the ghaut, but still on the south of the river), Phirkiab (opposite to Jhilitoong on the north of, and *across* the river), and Gowri and Samari-bhanjang (running northerly up the Trisool to the Sunga, or bridge at Khinchat), where we complete the circuit by linking the last to the Nayakote ridge, the two in that spot pressing close on either bank of the river. With regard to size, if we speak of this tract as a whole, it will not be easy to be at once precise and distinct ; but we may observe in regard to the body of the district inclusive of the north-east corner on the low level, that from Devi Ghaut direct, up the Trisool to the Sunga at Khinchat, the length is four miles, by the road five miles ; from Devi Ghaut to the town of Nayakote from four to five miles through the middle of the elevated portion of the district ; from Devi Ghaut up the Tadi to its junction with the Sindhu, four miles ; and the same from the

latter point to Khinchat across the base of the triangle, from the Tadi to the Trisool, again, and inclusively of the legs of the district from Devi Ghaut to Burmandee, up the glens of the Tadi and the Sindhu is six miles; and from the same point up the Tadi to its junction with the Likhoo, eight miles. The maximum breadth of the entire district is at the base of the triangle just adverted to, and here the distance by the road from Bhalu Dawra to Khinchat is four miles. The mean maximum of breadth however is not above three miles, that of the plateau alone between the principal river, two miles. But, in speaking of breadths especially, we should distinguish between those parts which have been called the legs and the body of the district, the legs being the subsidiary vales of the Sindhu and of the Tadi. The former of these, then, from the base of Burmandee to the apex of the Bhaloo ridge, where this glen merges in the larger one of the Tadi, is only from 200 to 400 yards wide; whilst the width of the vale of the Tadi in that portion of it which extends lengthwise from the apex of the Bhaloo ridge to that of Kabilas at Chonghora, is from $\frac{1}{2}$ to $\frac{3}{4}$ of a mile: and if we distinguish (as well we may) the low tract lying on both banks of the Tadi, between the western extremity of the two last named divisions, and the point where the Tadi gets compressed into a mere gully on the upper confines of Belkote, (forming the north-east corner just spoken of inclusively) we have a third tract, which is some 1,200 yards in medium breadth. The length, again, of the first of the subdivisions of Nayakote is two miles; of the second, four miles; of the third, one mile. All these three are tracts of the same character, that is they are hot, swampy, rice beds on the level of the streams that water them, except in the instance of the glen of the Tadi, which, upon the right bank of the river, possesses a widish strip of land considerably raised above the stream, and running under the Maha Mandal and Nayakote ridges (where the court and chiefs have houses) to where the latter spreads into the chief elevated plain of the district above spoken of. That plain cannot be watered from the Trisool or Tadi by reason of its elevation; and as the Nayakote ridge, whence it is derived, yields no efficient springs of water, the plain is condemned to exclusive dependence on rain. Every such plain or plateau is, in the language of Nepal, a Tar; whereas the lower and perpetually waterable tracts, above contradistinguished, are, in the same language, called

Byasi. The first of the three is the Sindhu Byasi, from the name of its streamlet, the Sindhu; the next the Tadi Byasi, from its river; and the third either Tadi Byasi also, or Sangum Byasi, from the confluence of the Sindhu and Tadi within it. The Tar, or chief tract, is numerously subappellated, as Pullo Tar, next Devi Ghaut; then Manjhi Tar; then Burr Tar, next the Nayakote hill; with various others parallel to these and nearer the Trisool, towards which the plateau in general has a tendency to sink step-wise, though never nearer the deep narrow bed of that river than several feet, twenty or more. These Tars are rather more wholesome and habitable than the Byasis, and capable of more various culture, though chiefly of trees, since trees alone can flourish deprived of water except from rain; and thus is, in part, explained the great predominance of mangoe and other groves over fields of agriculture in the Tar or Tars of Nayakote, which however lovely at all seasons, boast no winter or spring crops, despite of the high temperature of the place; the Tars are too dry, and the Byasis too wet for such spring crops, though they be common in the much colder valley of Nepal Proper. The difference of temperature between the valleys of Nayakote and of Nepal Proper is occasioned by the difference of elevation above the sea. This difference amounts to 2,250* feet; and the same cause affords us also the only apparent, but very far from satisfactory explanation of the fact, that, whilst Nayakote is pestilently malarious from March to November, Nepal Proper is free from this scourge, *all other circumstances being the same in each valley*. The lowlands of Nayakote, consequently, are but very thinly peopled, the only permanent dwellers therein being several singular and affined races of men, called Durri, Kumhal, Manjhee, Bramoo, and Dénwár, of whom more hereafter, and some few Parbuttiahs and Newars. The Newars build and dwell solely on the Tars. The Parbuttiahs will not adventure even so far, but usually have their houses on the hills around, and never suffer themselves to sleep in any part of the low lands for a single night between April and November. In the Byasis, then, are the houses of Denwars and their compeers only: in the Tars, those of the above people and of some few Parbuttiahs and Newars also, but in neither do the clusters of cottages hardly ever

* The valley of Nepal is 4,760 feet above the sea.

reach the size of a village, and the dwellings stand for the most part single and scanty. The whole district is said to contain 700 houses, but I doubt it, even allowing 100 or 150 houses to the town; and half the number in either case would probably be nearer the mark.

The soil of Nayakote contains a juster proportion of clay to silex and calx than the soil of the greater valley of Nepal Proper, which is derived principally from the debris of granitic formations; and hence we obtain an explanation of the reputed eminent fertility of the former, and more, surely, of its celebrated potteries. The heights around Nayakote are of inferior size, consisting on the northern side especially, mostly of iron clay, of very deep red tint; and the superficial soil of the Tars is for the most part the same, the substratum being however, usually gravel, whence the dryness of their soil is increased.

The soil of the Byasis also is clayey, but untinted luteous white, and where unmixed with silex or other ingredients, even more tenacious than the red clay. The pottery clays are exclusively of the latter sort. Mica, so common in the great valley of Nepal, is here never witnessed. The high temperature of Nayakote admits of most of the trees, forest and fruit, as well as of the superior Cerealia of north Behar and the Tarai being cultivated with success, though they cannot be raised in the great valley. Nayakote has besides distinguished products of its own, which are not found, or not found so good, in the plains of Behar; these are the orange and the pine-apple. The forest trees peculiar to the district, not found in the great valley, and identifying this of Nayakote with the Tarai and plains, are the Saul (*Shorea robusta*), Burr and Pipal (*Ficus Indica et Religiosa*), Semal, or cotton tree, Pras, Neem, and Mohwa. The *Pinus longifolia*, and other mountain growths, are frequently found mixed with these on the declivities around.

The chief of the fruit trees is the mangoe of various sorts, many exotic and superior, though the celebrated Bombay mangoe is apt to lose its flavour by swelling into undue and dropsical dimensions; the tamarind, the Bair, the jack fruit or Bel, the Kathur, the Badhur, the Pukri, the guava, the custard-apple, or Sharifa, and, in a word, all the ordinary fruit trees of India, none of which, it should be added, flourish in the larger valley. To the above we must subjoin the following exotics grown in the gardens of Khinchat, belonging to the government. Naril, or cocoanut, Supari, or betel vine, pear, apple,

apricot (native), and plums of many kinds. All but the two first of these, however, flourish as well, or better, in the greater valley, being European products.

The smaller horticultural products of Nayakote are pine-apples, (excellent,) plantains of many kinds and good, Jamans four sorts, melons, but no grapes nor peaches; pines, plantains, and jamans are denied to the greater valley, where however the orange—that boast of Nayakote, flourishes. The better kinds of the Nayakote oranges are equal to any in the world, so that our horticulturists in India should endeavour to procure and propagate them. The agricultural products of Nayakote resemble in general those of the greater valley of Nepal Proper; and as the latter have been fully described in print, I shall on the present occasion specify only the peculiarities of Nayakote produce, resulting from its more tropical climate. It has already been observed that whereas there are two crops per annum in the greater valley, there is only one in the lesser, because of the excess of moisture in the Byasis, and of the total want of means of artificial irrigation in the Tars. The Byasis yield only rice, which is not planted nor reaped at the early periods prevalent in the greater valley, but at the later ones usual in the plains of Behar; and the like is true of the sugar-cane, which is grown on the skirts of the Byasis. In the great valley every blade of rice has disappeared by the beginning of November, and half the crop by the middle of October; the untransplanted sorts of Ghya even sooner. In Nayakote the rice-harvest lasts till the beginning of December, nay to the middle of that month, and there are then no means of desiccating the fields rapidly enough for a spring crop. The rice grown in the Byasis are different from those grown in the greater valley, with the exception of Malsi and Toulis, and even of these two sorts there is but little. Munsera is the staple crop of Nayakote, and of its several kinds, as Doodia, Gouria, &c. It is of a bright golden hue, straw and grain, and longer in the stalk than our rices, to the best of which it is equal in quality. Among the seventeen to twenty sorts of rice grown at Nayakote, are the Mal-bhog, Krishen-bhog, and other fine descriptions for which Phillibheet is so famous. None of these last can be raised in the greater valley. The following are the names of the Nayakote rices—

Malsi,	Krishen-bhog,	Isegoon,
Touli,	Bairini,	Anandi,
Doodraj,	Charinagari,	Roodra,
Manseera,	Jara Sari,	Katonja,
Gouria,	Mal-bhog,	Tharia,
Kala Gouria,	Jhagri,	&c. &c.

The Ook, or sugar-cane of Nayakote, is incomparably superior to that of the greater valley, and indeed to that of most parts of India. There are five principal sorts, four of which are yellowish, and the fifth dark red. I purpose to send specimens of these to Calcutta for examination. Ook is grown on the skirts of the Byasis as well as on the declivities of the hills near them. On the Tars, or plateau, or upper levels, are grown, besides the ordinary rain's produce of similar sites in the greater valley, the superior sorts of Dall such as Arher, and cotton of inferior quality, neither of which can be raised at all in the greater valley. Of the whole surface of the Tars of Nayakote, a half probably is devoted to gardens and orchards; a quarter to fields of dry produce; an eighth to rice or wet produce, and the remaining eighth may be barren.

The genera of Mammals and Birds observed during a hurried visit, under disadvantageous circumstances, were *Nemorhedus* (Ghoral), *Styllocerus* (Katura), *Martes* (Flavigula), *Sciuropterus* (Magnifirus), *Scinrus* (Locria), all common to the greater valley; *Corvus*, *Pastor*, *Coracias*, *Alanda*, *Anthus*, *Motacilla*, *Budytes*, *Pyrgita*, *Phœnicura*, *Saxicola*, *Phœnicornis*, *Dicrurus*, *Musciapa Tichodroma* (Muraria) *Picus*, *Palæornis*, *Clorhynchus*, *Totanus*, *Tringa*, *Egretta*, *Anas*, *Querruedula*, *Carbo*, *Mergus*, *Turtur*, *Euplocomus*, *Gallus*, (Jungle-cock *Baukria*,) *Chætopus*, *Perdix*, *Coturnir*, *Hemipodius*. Of these *Gallus*, *Coracias*, and *Palæornis*, unknown to the greater valley, proclaim the *quasi*-Indian climate of Nayakote; as *Carbo* and *Mergus*, also unknown there, do its larger rivers. For the rest, the species as well as genera are those common to both districts. The wall-creeper of Europe, supposed to be confined thereto, is frequent in both.

The commerce and manufactures of Nayakote are too inconsiderable to claim specific notice; but in the cold season, in this as in all other smaller valleys of Nepal, booths are erected on the river-side by traders and craftsmen from the great valley, who reside there for the four coldest and salubrious months (December to March inclusive) ex-

changing grain for rock salt with the Bhoteahs, both Cis and Trans-Himalayan, dyeing the home-spun cloths of the neighbouring hill tribes with the madder supplied by them and the indigo of Tirhoot, and tinkering, and pedlaring, and huckstering, for the assembly collected at this petty sort of fair.

It has been already observed, that the inhabitants of Nayakote consist of several peculiar races, besides the ordinary Parbattia tribes, and the Mewars. Both the latter have been described elsewhere, I shall therefore confine myself in this place to a short notice of the former, or Denwar Darre, Manjhi, Brannoo, and Kumhal. These tribes are exceedingly ignorant, and moreover are disposed to use the little wit they have in cunning evasion of all inquiry into their origin and history, affecting to be hill men, employing the Parbattia language, and pretending to have forgotten their father-land and speech. In their dark-hued skin, slender forms, oval faces, elevated features, and peculiar dialect, barbarous *patios* as the last now is—may be traced, however, the indisputable signs of a southern origin. These men certainly do not belong to the Tartaric stock of the mountaineers of Nepal, but either to the ordinary stock of the Indian population (Indo-Germanic) or to some of those fragmentous branches of it which still here and there represent a preceding aboriginal race, as the Hos, Mundas, Gonds, Bhils across the Ganges, and the Tharus of the Nepalese Tarai. Between the last mentioned and the Denwars in particular, a distinct affinity may be traced; but to verify and illustrate this affinity through Tharoo helps, is as little feasible, as to do it through Denwar ones; and I shall only therefore venture to say at present, that whether the Tharoos of the Tarai, and the Denwars and their compeer cultivators of Nayakote, and of other similiar low and malarious valleys within the hills (for in many others they are found), belong to the aboriginal or to the ordinary stock of Indian population, they are closely connected among themselves, separate from the Tartar breed of the highland races, and, in the hills emigrants from the plains of north Behar several generations back.

The Manjhis, Kumhals, Bramoos, Denwars, and Darrees inhabit with impunity the lowest and hottest valleys of Nepal, just as the Tharoos do the Tarai; and the Mundas and Oorans of Chota Nagpore, both as recent servants and settlers, merely in the case of the last two, who are

chiefly mentioned here because of their participating with the races now before us, in that singular immunity from malarious affection which is not known to be the attribute of any other people whatever.

Wherever malaria rages from March till November, beyond the saul forest and within the hills, there the Denwars, Durres, Bramoos, Kumhals, and Manjhis dwell, and dwell exclusively; sometimes collected in small villages, more usually in scattered cottages comfortably built of unhewn stone, or wattles laid over with plaster, and furnished with a pent and overhung roof of grass or rice straw, which is verandahed towards the east. They follow the avocations of agriculturists, potters, fishermen, and ferrymen, and at all these crafts, and more especially at the second, they are very expert; the Kumhals of Nayakote in particular being renowned for their workmanship even in the vicinity of the very able craftsmen in that kind, whom the great valley produces.

These races of men affect a distinctness among themselves which is fit only to make an enlightened stranger smile, though it may possibly indicate different periods of migration from below, and of settlement within the hills, or migrations from different parts of the plains. In general the five tribes or races will not intermarry among themselves, nor with any of the races around them; and they allege that their languages (dialects) as well as usages are distinct. But they all call themselves Hindoos, though they neither believe in the sacred scriptures of the Hindoos, nor accept the sacerdotal offices of the Brahmans. With a general resemblance of manners and customs, they have some trivial diversities of usage, as follows:—

Manjhis. Their priests are the old men of the tribe; in making burnt or other offerings to their deities, they use no sacred or other words or prayers. On account of births they are impure for four days: they cut the navel on the day of birth, and four days afterwards make a feast. On account of deaths the impurity lasts for ten days, but under stress of business one day's observance will suffice at the moment, so that the other nine are observed afterwards. *Denwars.* They allege that they came from the western hills; their priests are their husbands' daughters' and sisters' sons.* Impurity at births lasts for ten days, and the same at deaths: they will not eat pulse dressed by

* These purely arbitrary customs may serve hereafter as helps in tracing the affinity of these and other semi-barbarous races throughout the mountains and hills of the Indian continent, the *dissecta membra* of its original population.

Brahmans, but rice, if it have ghee in it, they will. They sometimes enter into trade and service. *Durree, Kumhal, Bramoo*, have a general resemblance of manners and customs with the last; but they will not eat rice dressed by Brahmans, whether it have ghee in it or not, but will eat other things of Brahman's dressing. None of the five races has any written language or characters; but the investigation of their common connexion, and of their affinity with other aboriginal races inhabiting other more or less secluded localities throughout the plains of India, might still be managed through their speech, their physical attributes, their manners and customs, if the Argus jealousy of the Nepal government could by any means be charmed into a more discriminating use of Chinese maxims of foreign policy.

Rivers falling within the above limits.

1. The *Sindhu*, rises from Sindhubhanjung, an offset from mount Manichur, or the most eastern part of Sivapoor, the northern barrier of the greater valley. The Sindhu has a course of about fifteen miles almost due west, behind, or to the north of Sivapoor and Burmandi, through a narrow fertile glen, which is somewhat interrupted by the projection of the base of Burmandi, where the main road from Cathmandoo runs. Above this point the glen often bears the name of Jansen; the river is a mere streamlet drawing half its water moreover from the west aspect of Burmandi, below the Resident's Powah, or bungalow. It falls into the Tadi at Narain, or Ghur Ghaut, being divided from the Likhu by Bhaloo Danra, or the bear's ridge.

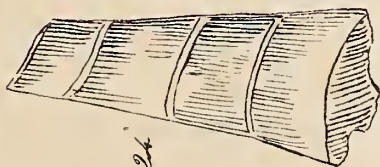
2. The *Likhu*, a somewhat larger stream than the Sindhu, parallel to it on the north, and separated from it by Bhaloo Danra. The Likhu rises from above the Kabilas ridge, which divides it from the Tadi on the north. The course of the Likhu, though in general parallel to that of the Sindhu, yet radiates towards the north, as the Tadi does still more. The Likhu is about double the size of the Sindhu, and has a course of perhaps twenty miles; it falls into the Tadi at Choughora, four miles above the lower Durbar of Nayakote. Its glen is cultivated throughout, and has an average width of 300 yards in its lower part. It is not a third the size of the Tadi.

The *Tadi*, classically styled Suryavatti, from it taking its rise at Suryakund, or the Sun's Fount, which in the most easterly of the twenty-two little lakes of Gosainthan, is thrown off towards the east, as is the

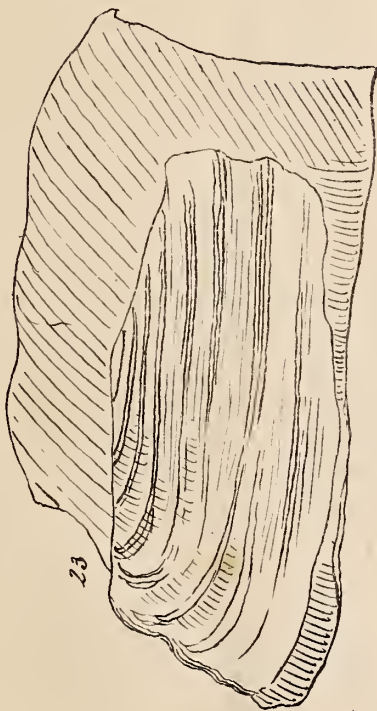
Trisul from the same point towards the west, by the loftiest of the snowy peaks in the region of Nepal Proper, and which is consequently the point of divergency of the nearest seven Gandasi on the one hand and of the seven Consiki, or Cosis, on the other. The Tadi, however, though at first put off in an easterly direction, is drawn round westerly to mingle with the seven Gandacks, instead of joining the proximate Milamchi and Inalcini, or first feeders of the Sun Cousi, by a large ridge running south from Gosainthan nearly to Sivapoor, and putting off laterally towards the west the inferior ridges of Kabilas and Nerja, which separate the rivers Likhu and Tadi in all their lower and parallel courses. The Tadi proceeding at first easterly, is gradually bent to the west by the great ridge just mentioned. The whole course of the river to Devi Ghaut, where it merges in the Trisul, may be thirty miles, ten east and south, and the rest WSW. In its lower course, before reaching Nayakote, it is bounded on the left bank by the narrow ridge of Kabilas, and on the right by that of Nerja. It receives the Likhu at Choughora, four miles above, or east of, the lower Durbar of Nayakote, and the Sindhu at Narain Ghaut opposite to that Durbar. In the rest of its course of about four miles WSW. to Devi Ghaut it confines the great Tar plateau of Nayakote on the south, just as the Trisul does on the north. At Narain Ghaut the Tadi in December is thirty to forty yards wide, and two feet deep. It is but little wider or deeper at Devi Ghaut, and consequently is not a tenth of the size of the Trisul, which at the Sunga of Khinchat is thirty-six yards broad and twenty-two and a half feet deep. The glen of the Tadi is cultivated throughout, nearly, and in its uppermost parts is said not to be malarious.

The *Trisul*, or most easterly of the seven Gandacks of Nepal, rises from the principal of the twenty-two Kunds, or lakes of Gosainthan. These lakes occupy a flat summit of considerable extent, that cannot be less than 16,000 feet high, and lies immediately below the unrivalled peak variously called Nilkanth, Gosainthan and Dhanlogiri. The lake more especially called Gosainthan is probably a mile in circuit, and close behind, it from the perennial snow, issues by three principal clefts (hence the name *Trisul**) the river Trisul, or Trisul,

* The legend of the place states that Maha Deva went to the snow to cool his throat which had been burnt by swallowing the kal kut poison, that appearing at the churn-



24



23

All these are of the Natural size



1a



1b



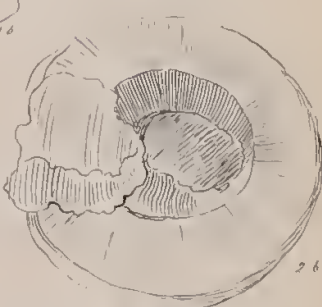
2



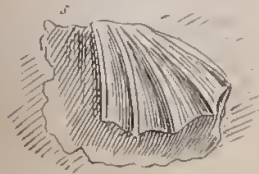
3



2a



2b



4



5a



5b

Gryphosia

Dorsal view



7a



7b



8



9

Gandaki. Its course is at first due west almost, for perhaps fifteen miles, but then turns SSW. running in that direction for twenty miles, and more, to Devi Ghaut. It is a deep blue, arrowy, beautiful stream, conducting not only the pilgrim to Gosainthan, but the trader and traveller to Tibet; the road to Kerung in Tibet striking off from the river where it bends (as you ascend) to the east, and the town itself of Kerung being visible from Gosainthan in clear weather, at the distance of perhaps thirty miles. The Trisul, four miles above Nayakote, receives the Betravati at Dhaibung from the NE. It is a petty stream, not having a course of above fifteen miles from one of the resilient angles or bosoms of mount Dhaibung or Jibjibia, the continuation of which ridge towards the west, and across the Trisul, is called *Salima Bharsia*. This latter ridge conducts another feeder into the Trisul from the NW. called the Salankhu, of about the same size with the Betravati. Considerably south of the Selima ridge, is the ridge called Samribhanjang, whence flows a third and still smaller feeder of the Trisul, named the Samri Khola, which disembogues itself into the Trisul from the NW. half a mile to a mile below the Sunga of Khinchat. The valley of the Trisul is narrow, and without any Byasi, or plain on the level of its waters, which flow in a deep bed. The height, however, on one or both sides, supply numerous rills for occasional cultivation, which is maintained as far up as ten miles above Dhaibung, a considerable village, where the ordinary Parbutiah population begins to yield to the race called Kachar Bhotiahs, or Cis-Hemalayan Bhotiahs. At Devi Ghaut the river Trisul is passed by a ferry most jealously guarded; nor is the river thence to Devi Ghaut permitted to be used for any sort of transport, or even for the floating of timber, though the rapids (there are no cataracts) may help the prohibition. A few miles below Devi Ghaut the streamlets poured into the Trisul by the glen of Dhunibyasi, affords much better access to the great valley of Nepal, by the route of the Trisul, than that which follows that river to Nayakote and thence leads over Burmandi. These better routes issue into the great valley at Thankote, and at Ichangu Narain.

ing of the ocean threatened to consume the world. Maha Deva is called "blue throat," from the injury he sustained. He produced the river by striking his Trisul into the snows.

*Fossil Shells discovered by Capt. HAY, 1st European Regiment, in the neighbourhood of Bajgah, Afghanistan.**

The fossil shells of which the accompanying are rough sketches, were all found by myself in the range of mountains between the Dundan, Shikun, and Karekotal passes; in fact nearly the whole at Bajgah. The formations in which they are found are so various, that I shall leave better geologists to describe them, but they are chiefly found in contorted strata.

No. 1. *a* and *b*. two views of the same shell.

2. Upper and under views of, apparently, the inhabitant of a shell; edges carinated: it is imperfect.
3. Tuberculated, and considerably depressed.
4. Plagiostoma?
5. A fragment only.
6. Gryphæa. There are no less than six species of Gryphæa (I think) found here.
7. Puzzles me. In appearance it is a Haliotis; but I have seen some specimens with the remains of a second valve; in which case it would approach the Gryphæa.

So many of the Gryphæa being found here, would argue that the water had formerly been of a considerable depth. Masses of them are found, and apparently adhering to the rocks, which they cover so thick and regularly, as to be quite a coat of mail.

8. Apparently a Univalve.
- 9, 10, 11, 12. Fragments of Bivalves.
13. Univalve costated.
- 14, 15, 16, 17. Bivalves. Specimens of 16 very perfect and closed.
- 18, 19, 20, and 21. Outlines of four species of Gryphæa? all of natural size.

* NOTE.—The publication of these drawings has, I regret to say, been long delayed owing to circumstances I could not controul. The fossils whence these are taken “with many other valuable collections of geological specimens,” says Capt. Hay, “and all my drawings,” were lost when H. M. Shah Shooja’s 4th Regt. of Infantry retired from Bajgah.

22. Piece of Coral ?

23. Has passed into Limestone.

24. Cavity formed in a conglomerate by a *Teredo* : but the fish itself, which is petrified, resembles a cork-screw ; they are of various sizes, all larger at one end than the other.

I have many other shells difficult to sketch, and two species of *Cidaris*

I should be glad to have correct drawings presented to the Society, as the distance is so great, that the probability is my collection may never reach India, or even the eyes of a connoisseur. Each shell having fragments of the rock adhering, will also enable me to classify their geology whenever I may meet an experienced individual.

It may be well to state, that I met with no shells in any of the mountain formations between Cabool and Syghan, where fragments are first observable in a yellow sandstone.

The level of Bajgah above the sea is about equal to that of Cabool.

Proceedings of the Asiatic Society.

(Friday Evening, 5th March, 1841.)

The Hon'ble Sir E. RYAN in the chair.

Capt. W. SMITH, proposed at the last Meeting, was hallotted for, and duly elected, to whom the necessary communication of his election, and rules of the Society for guidance, was ordered to be forwarded.

The following gentlemen were proposed as Members ; viz.

WELBY BROWN JACKSON, Esq. C. S. proposed by J. S. TORRENS, Esq., seconded by the Secretary.

FREDERICK BEAUFORD, Esq. C. S. proposed by J. S. TORRENS, Esq., seconded by the Secretary.

WILLIAM MASTERS, Esq. Head Teacher, La Martiniere, proposed by Dr. J. M'CLELLAND, seconded by the Secretary.

Library and Museum.

Lardner's Cabinet Cyclopædia;—Geometry, ....	....	....	....	1
Smith's Miner's Guide, London, 1836, 8vo...	....	....	....	1
Chart to ditto, ditto, ....	....	..	....	1
Naturalist's Library;—Mammalia; Natural History of Dogs, by H. Smith,				
vol. 1st, Edinburgh, 1840, 8vo. ....	..	....	....	1

Naturalist's Library;—Introduction to Entomology, by J. Duncan, Edinburgh, 1840, 8vo.	l
Sleeman's Report on the Depredations committed by the Thug Gangs of Upper and Central India, Calcutta, 1840, 8vo.	l
Society for the encouragement of Arts, Manufactures, and Commerce, London, 1840,	p
Oriental Christian Spectator, vol. 1st, No. 11, and vol. 2nd, No. 1st, ..	p
London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science, vol. 17th, No. 110, October 1840, ..	p
London and Edinburgh New Philosophical Magazine and Journal of Science, 3d. Series vol. 15th, Nos. 98, 99, and vol. 16th, Nos. 100, 101, and 103,	p
Magazine of Natural History, New Series, vol. 4th, No. 40, ..	p
Calcutta Monthly Journal and Repository of Intelligence, 3d Series, No. 69, August 1840, and No. 70, 74, for 1841, ..	p
Annals and Magazine of Natural History, No 35, October 1840,	p
Letters and Papers from the Société Royale D'Agriculture et de Commerce de Caen (leaf,)	p
Journal des Savants, Aout, 1840,	p
Annals de Chimie et de Physique, per Gay, Lussac et Arago, Tome 72, October 1839,	p
Glossarium Sanscritum, a F. Bopp, fasciculus, 1, Berolini, 1840,	p
Geneological Table of the Posterity of Timur, (in Persian) in leaf, ..	p
On Batta; Manuscript, (in German,)	p

For Distribution.—

(Notice,) on Tea from Assam,	12 Copies.
(ditto,) on Bengal Silk,	12 ditto.
(ditto,) on Jungle Silk,	12 ditto.

A Frame containing various coloured glasses;—presented by D. McFARLAN, Esq.

Victoria Armenian Spelling Books;—presented by Mr. J. AVDALL.

Burmese palm-leaf book with figures;—presented by Capt. McLEOD.

A box containing several impressions of coins in Sealing-wax;—

The plan of the Ghât to be erected to the memory of the late Jas. PRINSEP, Esq.;—presented by R. H. RATTRAY, Esq.

The Secretary submitted a copy of the “Bon Zeen,” a Burmese Work on Natural Philosophy, of ancient date;—presented by Captain W. McLEOD.

Read a letter from W. DUNBAR, Esq. Assistant Surgeon, 5th Irregular Cavalry, intimating the discovery of a coal bed in a village named *Bullea*, situated about 14 miles to the south of Hazareebaugh.

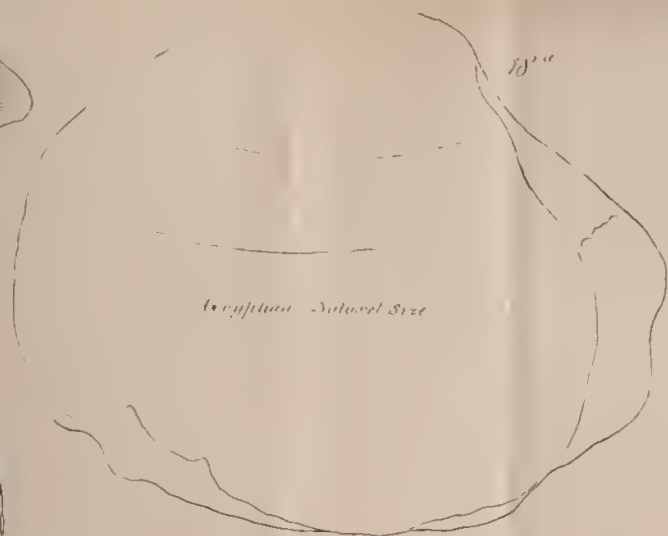
“On the banks of the *Suncherai*, a small nullah,” writes DR. DUNBAR, “running into the *Haharoo*, I first saw the coal, in a bed about three feet in thickness, with a gentle dip or inclination to the west. It was splintery, very black, lying below a friable sandstone and alluvium containing konkur. The bed seemed to be of great extent, and I have no doubt that any quantity of coal can be procured at this place.



(All these are of the Natural size)



21
Leptopora
 is still less strongly pectinate + etc.



18a
Leptopora Natural Size



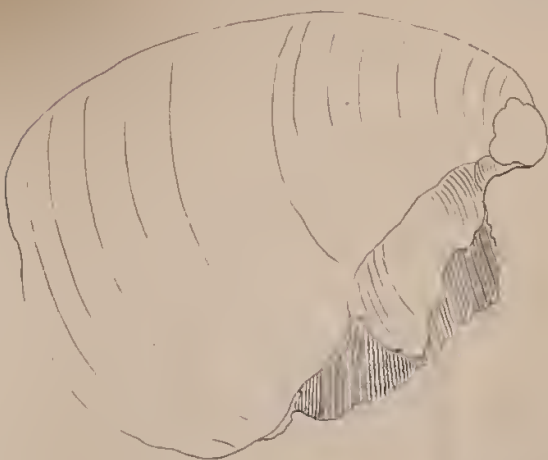
22
 apparently upper of vent



19a
 Showing hinge & part of
 second valve adhering less
 than Natural Size

19
Leptopora

20
Leptopora



very much in carver

I brought some specimens, and found that those from near the surface did not burn well, the other burned very well indeed, without a great deal of smoke, and leaving an inconsiderable quantity of ashes."

Read a letter from Mr. Secretary BUSHBY, of the 30th December 1840, enclosing copy of a dispatch from the Honorable the Court of Directors, requesting that the Asiatic Society will enable the Government to carry into effect the wishes of the Honorable Court in respect to all Zoological and Entomological Collections deposited in their Museum on the part of Government, or by persons conducting Missions on the part of the Government.

Resolved—That the papers be referred to the Officiating Curator for his Report.

Read a letter from Professor WILSON, of 12th October 1840, offering copy of two Lectures by him, on the religious belief and practices of the Hindoos.

Read a letter of 16th May 1840, from the Secretary to the Society of Antiquaries of London, forwarding the 28th vol. of *Archeologia*, for the use of the Library of the Society.

Read a letter from the late Lieut. W. LOVEDAY to Lieut. Col. STACY, with a sketch by the deceased of the Etawah Chuttree (in the vicinity of Neemuch) and copy of the inscription found there.

Lieut. LOVEDAY writes, "I have but little to add by way of information, merely that returning one day from shooting, wearied and unsuccessful, I was much struck with the elegant appearance of this Chuttree; and resting under its shade, examined with surprise, and no little gratification, the elaborate sculpture of the pillars, of one of which I send you a separate sketch; the date of the inscription (Sumbut 1130) caught my eye, when I immediately transcribed the whole. I do not send you a translation, as the Devree Nagree is clear and easily read, with the exception of two or three words, which our Calcutta friends will soon rectify. The inscription is on an upright stone slab, on the top of which are sculptured in alto-relievo, eight figures, representing the Rajah and his seven wives, to whose memory the edifice has been raised."

Read a letter, dated Cabool 24th December 1840, from Capt. W. E. HAY, reporting the loss of the whole of his fossil shells (sketches of which he had furnished) on the retreat of the Shah's 4th Infantry from Bajgah, together with many other valuable collections of coins and geological specimens, and all his drawings. Captain HAY adds, however, that he had accumulated a number of others from Bokhara, Samerkand, Balkh, &c. enclosing at the same time, some impressions of apparently ancient Hindoo coins.

Read a letter from Lieut. Alex. Murray MACGREGOR, of 31st January 1841, with casts of coins intaglio.

He writes "I have sent cast of a Jupiter seated on a throne, holding a Minerva on the palm of his right hand, a sceptre occupies his left, and the Eagle is

seated by his right foot; it is an intaglio found at Rome, during some excavations there, and given to me by a gentleman lately arrived from Europe, viâ Rome and Naples. The other is an *Ibex* of the Alps, found at Pompeii by the same person. Both are cut out of cinnamon-coloured agate, or perhaps a species of ruby, for it partakes of both, though more of an agate. The Cupid I found last February at Kanoje; it likewise is on a cinnamon-coloured agate, but does not seem a very well cut gem. I cannot find the gold coin mentioned in any of the Prinsep Plates. One of the casts is of a silver penny of George III; curious only in not now being a current coin."

Read a letter from Lieut. H. COMBE of 12th December 1840, forwarding a drawing of a coin in his possession for my information, with reference to the letters marked thereon. On the coin are figures; that with the spear is evidently male, with a glory round the head, the other with a crescent is a female. On the obverse is a male figure naked to the waist, with a fanciful tail.

The Secretary informed the Meeting that the subjects of the four foregoing communications would be noticed in the Asiatic Journal more fully, with lithographed drawings of the sketches by Lieut. LOVEDAY, and of the impressions of such of the coins as have not been already noticed.

The Secretary noticed the presentation by D. McFARLAN, Esq. of a handsome stained window-glass.

Read a note by the Secretary, with an estimate of charges for preparing coloured lithographed copies of the late Dr. LORD's Zoological Sketches of Cabool, and suggesting the reference of the choice of sketches to be published to a Sub-Committee, whom the President would request to undertake that duty, in communication with the Curator of the Society.

Dr. HUFFNAGLE and Dr. SPRY were selected by the President to form the Committee, and on the motion of Professor O'SHAUGHNESSY, the name of Dr. PEARSON was added. To the discretion of these gentlemen, was left the sketches to be selected for publication. On the motion of Professor O'SHAUGHNESSY, seconded by the President, Dr. PEARSON's name was also added to the Committee of Papers, to supply a vacancy.

Read a letter of 18th May, 1840 (of which the following is a copy) from Professor D. FORBES, of King's College.

To the Secretary of the Asiatic Society of Bengal.

Sir,

London, 8 Alfred Street, Bedford Square, 18th May 1840.

I should not have deemed the accompanying trifling essays of sufficient importance to be offered to your Society, were it not that a *complete copy* of the *Jâmi al tawârikh*

has been just discovered among the MSS. of the India House. It is a copy of the original Persian, transcribed A.H. 1081 and 1082, and belonged to the celebrated Dr. LEYDEN. It contains the whole of the author's Historical Works except the lives of Gházán Khán and Uljayto Khán, which may be considered biographical rather than historical. I have now the volume before me, through the kindness of Professor WILSON, who for many years was the ornament of your Society. Of this precious work, I am now engaged in drawing up an abstract for the next number of our Journal. The accompanying letter which appeared in our last number refers to the Arabic version of the work, which unfortunately is incomplete; perhaps by the exertions of your Society the lost fragments may yet be recovered, and I venture to say that we have still public spirit enough among us to publish this second volume both in Persian and Arabic if procurable. You have of course received Quatreméré's magnificent volume on the life and reign of *Hulagon Khan*. The portion of the author's works which we wish to publish, would be infinitely more interesting, particularly the histories of *China*, *India*, and the *Franks*, all of which are perfect in the Persian volume now before me, though none of them is quite complete in the Arabic. Should your Society be in possession of either the Persian or Arabic, would you kindly inform me of the same, and oblige,

Yours obediently,

D. FORBES.

A letter, read at a late Meeting of the Royal Asiatic Society of Great Britain and Ireland, on the recovery of a (supposed) lost volume of the *Jámi al Tawárikh* of *Rashídud-dín*.

P. S.—Since the above letter was printed in the Society's Journal; a complete copy of the *Jámi al tawárikh* in Persian has been found in the *Leyden* collection of MSS. now in the East India House Library. An analysis of this rare volume will appear in the next number of the Society's Journal.

D. FORBES.

8 ALFRED STREET,

18th May, 1840.

'Letter of Professor Forbes, on the Recovery of a lost portion of the Jámi al Tawárikh.

'SIR,

'Mr. W. MORLEY has kindly presented to me a copy of his interesting letter, addressed to Major-General Briggs, respecting the portion of the *Jámi al Tawárikh*, now in the Society's Library. About the time when MR. MORLEY's communication was passing through the press, I accidentally fell in with a much larger portion of the *Jámi al Tawárikh*, comprising one half the original volume, of which the Society's fragment forms about one-fifth. The two fragments have been clearly proved (as you will perceive hereafter) to be parts of the same grand original; and it is curious enough, that after many years, perhaps centuries of separation, they should have at last met in a portion of the earth so remote from their native city.

'That portion of the *Jámi al Tawárikh*, which forms the subject of the present hasty and imperfect communication, belonged to the late Colonel John Baillie, a distinguished member of the Asiatic Society. Shortly after the death of that eminent Orientalist, his house in town was let, and his books and manuscripts were temporarily removed to the house of a friend in Soho Square, previous to their being con-

veyed to the family estate in Inverness-shire.* They have remained however undisturbed in Soho Square ever since. A few weeks ago I happened to have a pupil who lived in the same house, and from his description of some of the MSS. I felt and expressed my wishes to see them, in which request I was most readily indulged.

'The first, indeed I may say the only, work that caught my attention was a large Arabic manuscript of a historical nature, written in a beautiful and very old Naskhi hand, with many pictures very creditably executed, all things considered. On the back of this rare volume is written in a distinct Persian hand "*Tárikh i Tabarí*," and as if this were not sufficient, there is a note written in Persian, on a blank page, folio 154, of which the following is a literal translation—"The name of this book is *The Tárikh i Tabarí*, (the History or Chronicle of Tabarí,) the author's autograph. The whole number of leaves when complete, amounted to 303; now however, some one has stolen and carried off one half of it, or about 150 leaves. It was written by the author's own hand, in the year of the Hegira 706 (A. D. 1306-7)."

'The information intended to be conveyed in this note, is, unfortunately rendered very suspicious, by the date given in the conclusion; as Tabarí had flourished some 450 lunar years earlier. On examining the work itself, I found that the Muhammedan history came down to the last of the Khalífás of Bagdad; hence it could not be the original Tabarí. As D'Herbelot, however, has mentioned two writers who have continued the history of Tabarí down to their own times, I thought this might possibly be one of them, and in order to verify the circumstance, I took the Persian version with me next day to compare them; but after making the most liberal allowance for the freedom generally used by Oriental translators, I found that the two could never have been intended for the same work.

'Resolved, if possible, to arrive at some satisfactory conclusion respecting the MS., I requested a very intelligent native† of India to accompany me to see it. The moment this gentleman looked at it, he told me that whether it was Tabarí or not, he had seen the identical book some months back in a house where he visited. On further inquiry, I learned that the book to which he alluded belonged to the Asiatic Society. Next day I examined the Society's MS. and found, as I had concluded, that it forms part of the *half* that is missing in Colonel Baillie's MS. In proof of this, I may mention that the ink and the handwriting are the same in both. The length and breadth and number of lines in each page are the same, and the paintings are in the same style in both. The works had been numbered originally by leaves or folia, as is usual in Oriental MS.; these numbers still remain on the second page of each leaf, and every leaf of the Society's fragment is missing in Colonel Baillie's work. There is no question then, that as Sádi hath it, "they are limbs of one another," for assuredly they originally consisted of but one work.

'Colonel Baillie's MS. contains at present 151 folia or leaves, being as nearly as possible one half the original number, as stated in the Persian note. The last leaf is numbered 218, so that sixty-seven leaves are wanting to complete the work from the beginning to the last leaf now remaining. Of these, there are seven leaves in the Society's fragment on the history of Muhammad. They are numbered (in their order) 57, 58, 63, 64, 66, 70, and 74, all of which are, of course, missing in Colonel Baillie's MS. If these seven leaves were restored to their places in Colonel

* Colonel Baillie's Books and Manuscripts are entailed property.

† Mir Afzal Ali, Vakil from the Maháráj of Satára.

B.'s MS. and the remainder of the Society's fragment subjoined, they would altogether form a volume of 210 folia, there being still a deficiency of ninety-three leaves. This goes on the supposition that the number originally consisted of 303 leaves, as stated in the Persian note.

The contents of Colonel Baillie's MS. may be conveniently classed under three distinct heads.

' 1st. From the commencement to folio 41.

' This portion of the work is perfect, with the exception of the first and second leaves; but the loss of these is greatly to be lamented, as they may have contained a general account of the whole volume, and an outline of its contents. This part is occupied with the history of Persia and Arabia from the earliest times down to the birth of Muhammad. At the same time the author has inserted, apparently in chronological order, copious accounts of the patriarchs and prophets of the Old Testament; also of Alexander the Great and his successors.

' 2nd. From folio 41 to folio 154.

' This portion commences with the genealogy and birth of Muhammad. It then gives a minute account of his life, and the history of his successors down to the capture of Bagdad by Húlakú Khán, A.H. 654—A.D. 1256. This part of the work is strictly confined to the history of Muhammad and the Khalífás, the events of each year being detailed separately, with the date prefixed. In this division there are missing altogether forty-six leaves; but by replacing the seven leaves already mentioned as contained in the Society's MS., the lacuna will be reduced to thirty-nine, the greater part of which occurs between folios 70 and 107 inclusive, which treats of the history of the early Khalífás. From folio 107 to 154 there is no hiatus.

' 3rd. From folio 154 to 217.

' The third part treats of the history of Persia under the Ghaznavi, the Saljúki, and the Atabeg dynasties. Like the first, it is of a somewhat miscellaneous character: the history of Persia is its leading feature. At the same time the author notices, in chronological order, such illustrious personages and remarkable events as came within his knowledge among other nations, particularly among the Christians. In this portion there are nineteen leaves missing, and these being towards the end, I cannot say how far the history extends—probably to the author's own times.

' Folios 217 and 218, (the last in the volume,) are occupied with the history of the kings of Kh'árizm. How much of the original volume this subject occupied is uncertain. From 219 to 248 inclusive, there is a breach which, for the present, we cannot repair. At folio 249 the Society's MS. commences the history of Khata, and proceeds uninterruptedly to folio 300, *if* we could put faith in numbers, of which more hereafter.

* Supposing then the two MSS. were re-united, there would still be *at least* the following deficiency :—

	Fol.
In Part 1st, containing the preface, &c.	2
In — 2nd, Muhammad and the early Khalífás,	39
In — 3rd, the latter history of Persia, &c.	19
Between fol. 219 and 248 inclusive, (subject uncertain)	30
Folia 301, 302, and 303, at the end	3
Total	93

‘I have reason to suspect, however, that the volume consisted originally of more than 303 leaves. In the Society’s MS. there is a lacuna of some leaves in the life of Shakmuni, while the numbers of the folia proceed without any interruption. This can be accounted for on the supposition that the folia were numbered some time after the work was written, but previous to its present dismemberment; and it will be perceived that the ink used in the numbers differs considerably from that of the text. The person who wrote the numbers may have known as little about the nature and contents of the work as the writer of the Persian note, who called it *The History of Tabarî*; and hence, I should think, arose the mistake.

‘I have no means of ascertaining in what part of India Colonel Baillie procured his MS., but I should say, most probably at Lakhnau, where he was long resident. That the Society’s fragment came from that quarter, within the last fifteen or sixteen years, can be easily proved. There is a duplicate of the life of Shakmuni in the Society’s Library, transcribed at Devî, a village or district of Lakhnau, in May, 1823*. That this was done from the Society’s original is all but certain, for the same hiatus occurs in the copy as in the original. The transcriber there mentions, in a note, that “there is *one* leaf missing (in the original);” but I am afraid, if we judge from circumstances, that *ten* leaves would have been nearer the mark. In the life of Shakmuni there are twenty-one sections, of which about ten are lost (from the seventh to the seventeenth). Each section before and after the last part occupies at an average a single leaf. I cannot believe, then, that the ten lost sections could have been comprised in one leaf, particularly as what remains of the seventeenth section alone occupies a leaf and half a page. It is not unlikely, then, that there may be other lacunæ which may have escaped the notice of the person who numbered the leaves—a point which can be ascertained only by a careful perusal of the work itself.

‘Should this brief account be deemed worthy of insertion in the *Journal* of the Asiatic Society, (perhaps, in company with Mr. Morley’s more ample communication,) it may prove the means of exciting our numerous Orientalists in India to make inquiries for the remaining fragments of this rare volume.

‘There is every reason to suppose that both the portions of the work now in London, came from Lakhnau; and in that quarter it is probable the rest may yet be recovered. Mr. Morley has given an accurate fac-simile of a portion of folio 74, and I may add, that where no breaks occur, each page contains thirty-five of such lines. Finally, such numbers as I have stated to be missing, will, most probably, have remained on the leaves of the lost fragments, which may thus be easily identified.

‘Nearly two years ago I had the honour of requesting the attention of the Society to some rare Oriental works mentioned in a Persian catalogue of the Library of Farzáda Kulî, or some such name. In the historical department of that catalogue, one of the first books entered is, “*The Chronicle of Tabarî*, the author’s autograph, in the Arabic language, with *seventy* pictures of Saints, his Eminence the Prophet, and sundry kings, very rare.” Now I strongly suspect that the work here described, is none other than Colonel Baillie’s MS. of the *Jâmi al Tawârikh*. The number of pictures in Col. Baillie’s half, is really *seventy*, and among these is a protraiture of Muhammad. The writer of the catalogue received the work as he found it marked on the back, and in the Persian note, folio 154, without troubling his head about its contents. What

* Vide Mr. Morley’s Note, page 23.

renders this supposition still more probable is, that the *Jāmi al Tawārikh* is not mentioned in the catalogue as one of Farzáda Kuli's books. Upon the whole then, there is good reason to infer that Colonel Baillie's MS. some forty years back, was one of the many rare works described in the catalogue of Farzáda Kuli's library; and if that treasure be not ere now dispersed, I should suggest that search should be made for it in the kingdom of Oude.

'Before I conclude these hasty remarks, I cannot help observing that the *Jāmi al Tawārikh* does not seem so very scarce a book among eastern writers,* as M. de Quatremere would lead us to suppose. It is inferred, for instance, that Mirkhond and Khondemír were either ignorant of its existence, or borrowed from it without acknowledgment. Now the fact is, that Mirkhond, in the preface to the *Rozat-al-saffa*, mentions this very work as one of the sources to which he was indebted for his materials. His words are,† "Kh'āja Rashíd tabīb, sāhib-i Jāmi, that is, Kh'āja Rashíd, the physician, author of the *Jāmi*," i. e., *The Collection*, or *Universal History*. Of Khondemír, I do not happen to possess a copy, but at all events, there can be no reason to suppose that he was ignorant of the *Jāmi*, as he *must* have read the works of his immediate predecessor, Mirkhond. It would be endless, as well as useless, to mention other writers who allude to the *Jāmi al Tawārikh*. In the introduction to the fourth volume of the *Kimiya-e-Sa'adat*, the author expresses his obligations to the *Jāmi al Tawārikh*, of Kh'āja Rashid, the wazīr. Even the very thieves who stole the Society's fragment out of the volume now in possession of Colonel Baillie's successor, seemed to have very well known what they were about, for the fragment is marked, "*az Jāmi al Tawārikh*," i. e. out of the *Collection of Histories*.

'In the Society's MS., No. 14, already alluded to as being a duplicate of the old fragment of the life of Shakmuni, there is prefixed (in Persian) an account of the author and his works, of which, as it is not long, a translation is here subjoined. "It is well known that the *Jāmi al Tawārikh*, compiled by Kh'āja Rashid al-dín, contains a history of the whole world, both as regards the lives of the prophets, and the manners and conduct of the kings of every region. In the same work the writer hath also given a sketch of the history of India; for he had learned something of the tenets of the sages of that country from (competent) people, and part (of his information) he had from the book of Abul rihán Birúní, who having frequently travelled to India in the service of Sultan Mahmúd, the son of Sabactagin, had held intercourse with the sages of that country. After he had made thorough proficiency in the science of the Indian philosophers, he translated, from the Indian language into the Arabic tongue, the book of Patankal, or Patanjali, which is a collection of all the sciences,

* It has been suggested to me, that the *Jāmi al Tawārikh*, alluded to by Mirkhond, &c., refers only to the *Tarikh i Gházání*, or first volume, but not to the last three. I must say, however, that I cannot perceive why these writers should have so misapplied the term *Collection of Histories*, to the history of a particular nation, which, besides, had a separate title of its own. I may further mention that, in a MS. in my possession, entitled *Majma al Gharáib*, the *Jāmi al Tawārikh* is quoted on a matter of chronology which is assuredly from the latter volumes, stating that, "from the fall of Adam to the birth of Muhammad there had elapsed 6102 years, six months, and ten days!"

and one of the most valuable works of the sages of Hind, (like the *Kitab i Shaffa*, by Shaikh al-rasi.) It contains an account of all their various sects, and the history of their ancient kings, also the life of Shaktmuni, who according to their opinion, and the testimony of Kamakshari al Bakhshí al Kashmírí, is the guiding prophet of the people of Hind and Khatá. To this work he gave the name of *Patanjal*, a copy of which he carried away with him.

"Since the history and actions of Shaktmuni, who was once the prophet of the people of India, have, through the lapse of time, sunk into oblivion, I, the meanest of God's servants, Abd ul Kádir, resident of Devi, of Lakhnau, have transcribed the following account of him from the *Jámi al Tawárikh*. And, at the request of the high in dignity and rank, Major Herbert, I have made a translation of it into easy Persian. In certain parts the original was defective and obliterated; these defects, with their proposed corrections, I have marked on the margin. Deo soli scientia."

"I have nothing further to add respecting this rare and ancient work, except to express my regret that it has not been deposited in the Society's library, where it might be accessible to Oriental scholars. There may be other valuable MSS. in Colonel Baillic's collection, which I have not had time to examine; and I shall only mention here, a very fine copy of the *Mahábhárata*. It is beautifully written on one roll of fine paper, laid on cotton or silk, and abounds with well-executed paintings, representing most of the complicated events described in Hindu mythology. I believe it contains the whole work, as the writing is extremely small, though very distinct. The roll is about 220 feet long, and I should say from four to five inches wide within the margin, which is ornamented and illumined throughout."

I am, Sir, yours faithfully,

8, Alfred-street, Bedford-square,
26th October, 1839.

D. FORBES.'

"P.S. In the preceding letter I have alluded to a Persian MS. in the Society's possession, entitled a *Catalogue of the Library of Farzáda Kuli*. This work is frequently quoted by my friend M. Garcin de Tassy, in his *Histoire de la Litterature Hindoui et Hindoustani*, lately published; for which reason I beg leave to subjoin the following extract from an account of it, which was read at one of the meetings of the Royal Asiatic Society in 1838.

"The accompanying MS. is a catalogue of books in the Arabic, Persian, and Hindu languages, amounting, on a rough estimate, to upwards of 2,000 volumes. It is fairly written and well arranged, the works being classed under the different subjects of which they treat, as may be seen by referring to the second blank leaf at the beginning, where I have given an abstract of the contents.

"Of the works here mentioned, many, I believe, are unknown, even by name in this country; but there is one in particular which merits attention, as it has been long given up for lost by the Orientalists of Europe. I allude to the *original Arabic text of the Chronicles of Tabari*, which is here described (p. 10) as follows:—'The Chronicles of Tabari—the Author's Autograph, with seventy portraits of prophets, his Eminence the Apostle, and various princes, IN THE ARABIC LANGUAGE—RARE.'

"Here then it is evident that the original of *Tabari* existed (in all probability) in India within the last forty or fifty years. Unfortunately there is no date, nor name of person or place mentioned in the book, from which we could discover of whose library

it is the catalogue. The last words are the writer's name, *Dávar Bakhsh*, a piece of information of no great consequence. On the first blank leaf some one has written, barbarously enough, in Roman characters*, what I believe is intended for Persian, and apparently signifies, 'A Catalogue of the Library of *Ferzada Kole*;' but even this affords us very little enlightenment. I am led, however, to infer from circumstances—in the first place, that the book has been written within the last forty or fifty years; this is evident from its mentioning (p. 90) *the Diwán of Sauda*, a Hindustani poet, who died only a few years before the commencement of the present century. Secondly, it is a catalogue of the library of *some prince*, as may indeed be inferred from its extent, but still more from an expression that occurs in page 95, viz., 'A list of the books remaining in the old chest belonging to his August and Sublime Highness.' Thirdly, and lastly, there is every reason to infer, that the prince alluded to was Indian, from the number of Hindí books mentioned in the Catalogue, and in the list referring to the old chest aforesaid.

"If the above inferences may be relied on, we have reason to hope that the original and genuine text of Tabarí, the Livy of Arabia, may yet be recovered. It would seem that an ancient manuscript of it did lately exist in India, and is, in all probability, there still. As to its being the *autograph* of the author, I believe we are to take that expression 'cum grano salis' as we do the *originals* of Corregio and Rubens, &c., so very plentiful among picture-dealers and amateurs. But whether the MS. here alluded to, be, or be not, the author's own copy, is a question of minor importance. The main object is to rescue it, ere it be too late, from that state of obscurity in which it at present lies, and to that end I have been induced to lay this brief and imperfect notice of it before the members of the Asiatic Society. It is probable that some individual out of that learned body may be able to trace the history of the MS. catalogue here presented. The booksellers from whom I had it, could tell me nothing as to whence it came, or whose it had been.

"It would be tedious to notice many of the rare works mentioned in the catalogue; there are a few, however, which I cannot pass over. In page 11, we have 'The Mustafá Náma, in the metre of the Shahnáma, containing the history of Persia (or rather of Islámism) from Muhammad to Tahmasp of the Suffi family, amounting to 104,000 couplets, beautifully written, and ornamented with gold dust.' Such is the literal translation of the description given of this stupendous work, which is very nearly *twice the size* of the Shahnáma, and embraces a period of about a thousand years.

"Further on, among the works on Philosophy, Logic, and Rhetoric, are mentioned several pieces translated from Aristotle, Plato, and other wise men of Greece, all of which are highly interesting. There is also a Persiau translation of the Makámát of Harfiri, which would be invaluable in explaining many passages of that learned, but, to us, obscure writer.'

"To the above remarks, written nearly two years ago, I must now add my altered belief that the *Tarikh i Tabarí*, mentioned in the catalogue, is nothing else than Colonel Baillie's MS. of the *Jámi al Tawárikh*. This I infer from the identity of the description given of both, and, above all, from the number of pictures agreeing in both. The doubts which I might feel as to the genuineness of Tabarí's autograph, do

* It runs thus,—*Ferisht Khoatab Khuwa Ferzada Kole*.

not apply to the *Jámi al Tawárikh*. Tabarí lived a thousand years ago; and Rashíd al Dín finished his history only as far back as a little more than half that period. That the *Jámi al Tawárikh* is really and truly what it purports to be, viz, the author's own copy, written under his own inspection, I have not the least reason to doubt, as I have seen manuscripts of an older date in as good a state of preservation. Should any of your readers feel sceptical on this point, they may easily satisfy themselves by carefully examining the hand-writing and paper, and comparing the same with others of the corresponding era."

D. F.

The Secretary noticed that he had made inquiries through friends in the North-Western Provinces to procure a copy of this highly valuable work, and had intimation of the existence of a copy of the 1st vol. in Arabic said to be at Lahore. He however believed that his correspondent (a native bookseller at Delhi) possessed the work himself. He had made some exertions to ascertain the condition of the volume, which he subsequently gave up.

The Secretary communicated the intelligence of the discovery of papers of value among certain MSS. volumes which were deposited with the late Mr. JAMES PRINSEP's books at the Society's Rooms. They consisted chiefly of MSS. of Capt. Herbert, the greater part of which were notes Astronomical, Chemical, and Geological, together with results of his Himalaya Survey, observations which was thought not to have been published. At any rate it was incumbent on the Society, thought the Secretary, to examine these papers carefully by a Sub-Committee; agreeably to that suggestion, Major FORBES, Professor O'SHAUGHNESSY, and Lieut. BROOME were requested to afford their valuable aid on the occasion. The Secretary further reported that among some old records of the Physical Class, Asiatic Society, were found several Catalogues of Minerals in the Museum, supposed to have been lost, of the collections by Coulthard, Rose, Streave, &c. &c.

The Secretary reported to the Meeting that some months ago he had communicated with MR. W. C. HURRY, on the subject of a Chinese Dictionary compiling by the REV. J. M. CALLERY, and that he had requested from that gentleman certain documents connected with the undertaking. These were now received, and submitted. It was resolved, that these should be referred to the Committee of Papers for consideration and report.

Read letter from MR. J. AVDALL, of the 5th March 1841, forwarding for presentation to the Asiatic Society, a copy of his "Victoria Spelling Book," in Armenian, divided into two parts, and embellished with 24 engravings.

Read the following report submitted by the Officiating Curator for the month of February last:—

"H. W. TORRENS, Esq.

Secretary Asiatic Society.

"Sir,

"I have the honour to submit as follows my report for the month of February.

"*Geological, Mineralogical, and Paleontological Departments.*—Proceeding at every spare moment, with Catalogues, of which a part are now at press : and with the numbering and arranging of collections.

"The two cases of specimens forwarded by the Honorable the Court of Directors, under the care of Captain TREMENHEERE, as a basis for a Museum of Economic Geology, have been imported, and their contents temporarily arranged ; but before putting the labels we have to fit up the interior of two out of the three cases. Another case is wanting to exhibit this collection properly, and several others to contain the additions we can make to the Museum from the Society's collections and from donations, and for those expected from England. The report on this collection has been made and sent in to you.

"We have some valuable additions to these departments, which will be noticed in the account of additions to the Museum.

"*Mammological, Ornithological, and Osteological Departments.*—Several additions, which will be detailed at the conclusion. I beg to report that we can make up another box for the Honorable the Court of Directors ; it will consist nearly as follows :—

"1. Skeleton of a Fox (Indian) prepared by us.

"2. A small box of fresh-water shells, being part of a collection presented by Mr. Stocqueler.

"3 { 50 Skins of Birds,
 { 2 Skulls with horns,
 { 5 Horns,
 { 8 Fishes of the Indus, } Duplicates from Sir A. BURNES' Collection.

"I may suggest here that we point out to the Curator of the Museum of the Court of Directors, the great facility with which, if approved of by the Court, he might procure, in exchange for such specimens as he already possesses, some of the many which we require for the Museum of Economic Geology. It is scarcely possible to send home a skin of a bird, a skeleton, or a skull from India for which some duplicate may not be obtained in exchange, which would be of utility to us here.

"Three large cases of specimens have been sent down by Mr. CLARKE, Political Agent at Umballa, which upon examination prove to be the collections made by Sir A. BURNES, on his mission to Scinde, to which many of his drawings now in the hands of the lithographers relate. They seem unfortunately to have remained for the whole time without any care whatsoever, and many are wholly destroyed !

"Mr. Clarke informs us that the collection has been inspected by Dr. JAMESON, who has promised a report upon it. The contents of the chests were as follows :—

<i>Birds.</i> —retained for the Museum,	.. .. .	19
——— duplicates, to be sent home,	.. .. .	50
——— rotten, and thrown away,	.. .. .	22

Total, 91

<i>Skulls with Horns.</i> —for the Museum,	1
—— duplicates, for sending home,	6
Total,	7

<i>Horns.</i> —for the Museum,	2
—— duplicates, for sending home,	5
Total,	7

<i>Fish.</i> —for the Museum,	1
—— duplicates for sending home,	8
Total,	9

Porpoise skull, Alligator, Iguana, Lizard, Turtle, &c. altogether.	7
Snakes in spirits of wine, rotten and thrown away.	13
Skins of animals rotten and thrown away.	8

N. B. Claws and beaks of birds, and skulls of animals, preserved when worth doing so.

Fish Reptiles &c.— Nothing more to report.

“*Donations.*— Have been numerous and important. I have already noticed Sir A. BURNES’ collection, to which we have to add the following:—

Dr. SPILSBURY—a chest of Fossil bones from the Nerbudda.

Col. MACLEOD—two boxes, being series of geological specimens collected by the late Captain PEMBERTON on his mission to Bootan. No catalogue with them.

H. PIDDINGTON, *Acting Curator.*—A collection of Cotton, Coffee, Sugar, Tobacco, and Tea soils, &c. from India, Mauritius, United States, Singapore, &c. many of them analysed. 7 Specimens of Burdwan Iron ores analysed. Specimens of the earths used in the curious glazing of native Sugar-pans.

G. EWBANK, Esq.—A young panther. Skeleton for the Museum.

Mr. D. E. RODRIGUES.—A pink-headed Duck, *Fuligula caryophyllacea*—Museum.

Mr. H. P. VIERRE.—A Snipe, *Scolopax*?—Museum.

Purchased.—2 Wild Geese, *Anas indica* or black-hooded Goose. 1 Skeleton; 1 stuffed,—Museum.

I have the honor to be, Sir,

CALCUTTA,

Your obedient servant,

1st March, 1840.

H. PIDDINGTON,

Actg. Curator, As. Soc. Museum.

The Society having been requested by Government, by a letter from Mr. Secretary Bushby of the 3rd February last, to submit a report of their Curator on the specimens brought by Captain Tremenheere, and deposited with the Society for the basis of a Museum of Economic Geology, and in what manner they were of opinion additions to the present collection may most usefully be made to it—Read the following report from Mr. H. PIDDINGTON, dated 26th February, 1841.

H. TORRENS, ESQ.

Secretary, Asiatic Society.

Sir,

In obedience to the commands of the Right Honorable the Governor General in Council, conveyed in Mr. Secretary BUSHBY's letter to you, under date 3rd February, I have now the honor to submit my report on the collection brought out by Captain TREMENHEERE, as a basis for the proposed Museum of Economic Geology. I should state perhaps, that Mr. BUSHBY's letter only reached me on the 10th instant, and that I have also been delayed by the necessity of referring to Captain TREMENHEERE's Memorandum, which I have only this day obtained from Bishop's College Press. I have incorporated with the report, my views as to the additions which may most usefully be made to the Museum, and as to the manner in which these may be best obtained. I remark, that the Society in general is referred to on these points, but as my ideas relative to them are necessarily connected with the facts and views comprised in the report, I have thought that I might, without presumption, and even with some convenience, as to perusal, combine them in one statement.

I.—The collection brought out by Captain TREMENHEERE, is a valuable basis for a Museum of Economic Geology, but it should be borne in mind, first, that it is only a commencement; and next, that it is almost a purely English collection. The little we yet know of Indian Geology has taught us that, on many points, there are wide differences from the received systems at home, extending even to the absence, or great rarity, of whole formations, and the presence of others which have no known corresponding types in Europe, or indeed in any part of the world; and it is quite possible that her mineralogy, when better known, may also produce its novelties. Hence we require,—if we wish to render our proposed Museum complete, as a light to the acquisition of existing knowledge, and a guide to future research, and this more especially in an economic point of view—a complete English and foreign series of specimens, by which the student and speculator may well understand their systems and processes, and a complete Indian one, fully to comprehend and avail ourselves of our own. I mention this in the first place, that I may not appear desirous of embracing too much, or to be remarking in any spirit of depreciation upon what the liberality of the Honorable the Court of Directors and the Government of India have allotted to the Society.

II. *Coal*.—The present collection comprises 51 specimens of coal and anthracite, from various coal fields. Those from several other English coal fields, as I learn from Captain TREMENHEERE's report, are to be sent out. To these I suggest should be added specimens from the Scotch, and if possible from the French, Belgian, and American coal fields; with a series of specimens from each, illustrating also the coal formations and pseudo-coal formations; as for instance, that of Brora in Sutherlandshire. As we improve our mining systems and our mining knowledge, we shall probably obtain better coal.* We require also a set of sections of the coal measures of

* It may be perhaps doubted if our Indian coal has yet had fair play! The amount of our experiments as yet seems to have been, the burning of Indian and English Coal upon grates and in furnaces made for the latter, and then to pronounce the Indian coal as inferior! It is so no doubt, but it *might* produce far better results in grates and in furnaces adapted to it, on the principle that every kind of coal requires a different arrangement of these, to produce its maximum effect. This remark is not perhaps exactly in place here, but the importance of the subject may excuse its introduction.

different districts. These are not always published, but many of those which are not so may perhaps be obtained for us by the Honorable Court, through Mr. DE LA BECHE, or by the efforts of members and friends of the Society through their connections at home.

I allude to American specimens here, and shall have occasion to do so again in the course of this report, because there are peculiarities connected with the Geology of both North and South America, which render every light obtainable from those countries of the greatest interest to us. The use of anthracite in metallurgical operations, is but recent in England, and I am not aware that it has yet been used there for steamers, though the Americans are said to use it very extensively in their steam-boats. Models of all kinds of anthracite furnaces are an object of much importance to India, where this combustile is so often found.

III. *Iron Ores and Smeltings.*—The collection comprises about forty specimens of iron ores, their lodes, smeltings, and slags. We must recollect, in relation to this most important metal, in which India is so rich, that a considerable portion of the Indian ores of it, are varieties of the black or *protoxided* class, as magnetic iron-ore, titaniferous iron-sand, iron, glance, &c. though we have, as in Burdwan, and many other places plenty of the other kinds, of the finest quality, while the majority of the English wrought ores belong to the Red and Brown, or *peroxided* and carbonated classes. Again: the whole system of English iron-smelting in the present day is one of smelting by coke; whereas the finest European irons, as the Swedish, Biscayan, Catalonian, some of the German, and all our fine Indian irons, are made by the charcoal process. Many of our rich ores are moreover situated where wood is abundant, and even a nuisance, and likely to be so for a long period of years; while coal (or coke) were it only from the want of roads, must be for a long time out of the question in such situations, to say nothing of the limestone.

Hence I should say, that it is a great desideratum in an Indian Museum, to possess specimens of the Spanish, Swedish, German, Corsican, Elbese, Pyreneean, and other ores of iron, of known fine qualities, worked by charcoal only, and often affording excellent iron at a single operation, as many of our simple native smeltings are known to do. As a guide to the Indian speculator, these ores, with descriptions or models of their furnaces, and full accounts of their processes (when these are not to be found in standard works of easy reference here) may be invaluable, as shewing him how to direct his efforts most advantageously and upon a scale, perhaps, better suited to his means than are the vast operations which the English iron-master, from the confined rates of profit, and excessive competition at home, finds indispensable. I may add in reference to this matter, that strange as it may appear to those unacquainted with the subject, there is scarcely any question of metallurgic chemistry upon which so little is known as that of the ores of iron!

IV. *Tin Ores.*—In this department the collection is very complete; from the lodes and ores, their roasting, stamping, washing, and smelting, down to the refuse of the furnaces. In a word, almost nothing is here wanting, and I embrace with pleasure this opportunity of saying that the mass of the specimens in all classes appears to be what may truly be called *working* specimens, as distinguished from the *show* specimens of the mineralogist's cabinets, and thus of much higher value for our purpose.

The Tin assortment consists of about 20 specimens of ores and lodes of various kinds, and of about 24 of the ore in various states of preparation, its smeltings, refuse, &c.

Tin is an ore little found except in England, or in the Eastern Islands, and Malayan Peninsula (we know nothing of the Tin mines of Mawar or Ava) but with such additions as we shall be able to make to the collection, from specimens already in the Museum, we may consider it as tolerably complete with respect to this metal. The desiderata are—good accounts of the Saxon and Bohemian works, and ores, with specimens. Of the Chinese and Malay Tin smeltings of the Eastern Islands, with samples of their ores; and specially of their refuse or slags, which last are probably well worth examination. It is said that both silver and gold have been found in them; and there is a description of Tin brought from Borneo, which is sold to the Chinese at Sooloo, and other places, for exportation, at a very high price; this is said to contain one or both of the precious metals. For our Eastern provinces, the investigation of every fact of this kind is of high importance.

V. *Copper*.—The copper ores are about seventy in number. They are also mostly an English assortment, comprising only the ores most usually found and worked in England. Several of the Indian, Asiatic,* and American copper-ores now in the Museum, will form valuable additions to this series. Our desiderata here are however numerous, we require some of the continental ores of Europe, and a series from South America, especially of those which exhibit the mixtures (or combinations) of copper and silver, or copper and gold. We are promised, I observe, as with the tin ores, samples of the English ore in all the stages of its progress, from the mine till it leaves the smelting house, with its slags, which are so instructive to the working speculator. But we require these both from England, where the smelting of copper is a separate trade, and the poorest ores are turned to the best account, and where all is performed by coke; and also from such countries as South America, many parts of Germany, &c. where charcoal alone is used. It is evident that even under the most scientific management, the modes of smelting, as governed by the fuel, must greatly influence results. The preceding remarks (at p. 9.) on the fuel, which may be available in certain situations, fully apply to copper as to iron works.

VI. *Lead Ores*.—We have but nine of these (of but one or two varieties) in the collection; and these again, with one or two expectations, of the commonest kinds. Every thing therefore is to be acquired in this department. We can supply something as to Indian specimens from the Museum. The lead ores, independent of their value as lead, deserve high attention, particularly those of the argentiferous class, which in fact run into the silver ores, containing at times so much silver, as to render the lead of little or no importance.

VII. *Antimony, Manganese, Zinc, and Tellurium*.—We have in the collection but eight or ten specimens in all of the three first of these metals, though they are all of importance; we shall be able to supply a few from the Society's, but we may say pretty nearly, that every thing is wanting in this section. The Indian and Eastern ores of antimony are deserving of great attention, for none of them have been yet examined, and they are so commonly met with, that some will no doubt in the end be found to belong to the class of antimonial silver ores. I mention the auriferous Tellurium in the section on gold. Captain TREMENHEERE's paper announces, I observe, an assortment of ores and specimens relating to zinc and the manufacture of brass.

* *Asiatic copper ores*. With reference to my remarks at pp. 4 & 5, I may mention here as a confirmation, that we have in Colonel Burney's collection of minerals from Ava, an ore of copper (with the same half-roasted from the Burmese workings) which is certainly not a common one, and perhaps new to the English miner at least.

VIII. *Silver*.—We have but three of these ores, but we shall be able to supply several South American, and other specimens, from the Society's collections. We require, however, series of the European and American silver ores with their lodes, preparations, and smeltings. I mention particularly here, the Mexican and Peruvian silver ores, because some of them would, from their earthy appearance, and the small proportion of metal they contain, be passed by as mere red earthy soils or iron ores, which in fact they are. Some of these ores are from the staples of some of the great mines of Mexico and Peru, and it may be possible, that we have also deposits of these ores on the flanks of the Western Ghauts; or in other situations of which the geological features approach to those of South America, though upon a smaller scale.

“IX. *Gold*.—There are no ores of this metal in the collection, and but very few in the Museum. It is indeed generally obtained from washings, but it is of importance to us to have specimens of all its ores, particularly of the auriferous iron ores, and of the telluretted gold ores of Hungary, which so much approach those of antimony. We require also the alluvial and diluvial soils in which gold is found; and especially drawings or models of the American washing-frames, which are so extensively used at the gold-washings of Virginia, Georgia, and the Carolinas. These are cheap and effective, and perform so much work in a day, that many tracts which had formerly been abandoned by the gold-washers as too poor, have been washed over again to a good profit. It is evident that this is what is required for the gold-washings of Southern India, (and for the auriferous sands of our rivers, where labour, though cheap, is *made* dear by being applied in the expensive and wasteful process of hand-washings.

“X. *Quicksilver*.—There are no ores of quicksilver in the collection. We shall perhaps be able to supply one or two, but this metal is both so important as an article of commerce, and as an agent in the separation of the precious metals by amalgamation, that we should by all means obtain an assortment of its few ores, and specimens of the deposits in which they occur, from Spain, Idria, and South America. We shall not I hope be thought too sanguine if we hope that when the numerous carboniferous deposits of India are better known and studied, mercury may be found. We know that it exists abundantly in Yunnan, most probably in the formations in which it has always, hitherto been found, and it is therefore quite possible that it may be found on our Eastern (Assam or Cachar) frontier. Like silver, one or two of its known ores might easily be passed over. The metallic-looking ores of any mineral we know, are sure to attract attention; it is the ruddy-like, earthy-looking ones, therefore, which specially demand a place in a Museum of Instruction.

“XI. *Arsenic*.—We should not omit to collect all the ores and lodes of this metal which so much abounds in India and to the eastward. Independent of its value as an article of commerce, its frequent association with the precious metals may induce a hope that a careful examination of its ores might lead to some discoveries. It is probable that we are yet far from knowing all the combinations of this *Proteus* of the metals with others.

“XII. *Bismuth, Cobalt, Chrome, and Nickel*.—The ores, lodes, and every sort of information relative to these metals, should not be neglected. Some of these are

but little known, and new ones it is possible may be discovered. The uses of some of them (Bismuth, Cobalt, and Nickel) are probably only limited by their prices, and what they, or other metals now almost considered as curiosities, might become, if more abundant, the history of Chrome fully testifies.

“ XIII. *Alum, Soda, Borax, Amber.*—Specimens of the Alum-slates of Europe, of the Soda earths of Egypt and India, of the Borax and Boracic acids of Italy and Thibet, and of the Indian ambers, are also desiderata. In reference to one of these only, I may mention that I have ascertained that the soda earths of India may be purified and discoloured by a very simple process, and thus great tracts of land now barren and valueless, may yield *crops* as valuable as the barilla-fields of Spain, or the kelp-shores of Scotland.

“ XIV. *Agricultural Geology.*—Captain TREMENHEERE’s report adverts so ably to the now well recognised importance of this branch of the science, that no remarks of mine in this respect are necessary. The collection contains a few specimens of soils from Cornwall, but there are no labels or descriptions with them. Capt. TREMENHEERE informed me, that on account of his hurried departure, he was not able to find his notes, but hoped to be able to send them to me. I have had the pleasure of contributing, from my own cabinet of soils, about forty specimens of Cotton, Sugar, Tobacco, and Tea soils ; many of which are analysed. These are from America, the Mauritius, Singapore, various parts of India, &c.; and I am advised by Mr. STIKEMAN, Secretary to the East India and China Association, that through the active assistance of Lord John RUSSELL and Sir John CAM HOBBHOUSE, a chest of West India Sugar soils is now on its way to me on the ship “ Lord Melbourne,” for the purpose of comparative analysis with those of India and the Mauritius. A great desiderata here are Sugar soils from the valley of the Mississippi, and from Demerara ; for it is evident, that for Bengal the analogy mainly to be looked for is that between soils forming, as here, the alluvion of rivers. The volcanic soils are more likely to prove guides for those of Central and Western India. It should be borne in mind that we require for India not only the soils for tropical productions, but those also for the productions of temperate climates. At this moment, for example, one of the most valuable acquisitions we could obtain, would be a few specimens of soils from the hop gardens of Kent and Sussex ! as a guide to the gentlemen who are so zealously endeavouring to introduce that valuable plant.* In this department, then, nothing can come amiss to us ; for we may always dispose most advantageously of every thing. I forbear, for the sake of brevity, entering into the list of what we principally require.

“ XV. *Mineral Manures.*—The Mineral manures, from the peat of the jheels, so extensively used in India, to gypsum, which is now the main support of a large portion of the agriculture of the older American states, though its use is unknown here, should not be omitted in our collection. The kunkers of all kinds might, there is no doubt, be often available as a valuable manure, if their use as such was known.

* Specimens of the soils of the best sheep-pastures from England, Germany, Spain, and particularly New South Wales, would be also valuable guides; for it is certain that the quality of wool depends as much on the soil as on the grasses.

“XVI. *Architectural Geology*—*Stones employed for Architectural or Engineering purposes ; Ornamental Stones, as Marbles, &c.*—Of these the collection contains but one or two specimens. We have many of cornices, capitals, and images, which would afford much instruction, though the antiquity of but very few of them can be known. The conditions of climate here are so different from those of Europe, that it may be difficult to establish correct comparative views, though we need not on that account neglect European specimens, and the results of their experience. We require however, more especially, specimens of stones, bricks, and marbles from ancient Indian buildings and fortifications ; with, of course, the dates of their erections, when these can be ascertained. These it should be remembered are desirable both when they have well, and when ill withstood the effects of the climate ; for both are lessons to the architect. It should be carefully noted if they appear ever to have been protected by plaster, paint, or casing ; specimens from more recent erections, particularly where exhibiting signs of early decay, should not be neglected. The tomb-stones of the early European settlements might perhaps afford good practical lessons in this respect. The church of Bandel bears, I think, the date of 1680, and it is possible that many tombs of at least a century old, might be found, either European or native, of various materials.

“The foregoing remarks hold good for the ornamental stones and marbles. Our Museum affords a very few of these, and a geological series of specimens from the sandstone quarries of Chunar, by Captain FRANKLIN.

“XVII. *Mortars and Cements.*—We have nothing of this kind in the collection, nor in the Museum, as far as I have yet seen ; but the field which these afford for curious and profitable research, and the great public and private advantage to be derived from a thorough investigation of it, is immense. It would appear that many of the native cements of former times were, like those of the ancient Romans, even more durable than the brick or stone with which they were used, and very far superior to any thing which can now be made, even with the greatest care. It is then, well worth our attention to procure also from the ancient buildings, both of India and Europe, specimens of the mortars and cements. All the limestones which can be obtained, from the kunkurs up to the pure marbles, are of course desiderata, as being the raw material of the cements. I should add to these, specimens of the corals, and of the fresh and salt-water shells so extensively used for making lime in India. We are quite ignorant as yet of what may be the effect of mixing the shell and stone limes in various proportions ; of what is owing to the Silica alumina, and oxides of iron in the kunkurs, to the phosphates (from the shells or the iron of the kunkurs) and to all these with the various proportions of lime and magnesia, which form the bases of the cements. These are great objects of research, for which the first requisite is to have series of specimens at hand ; without which they must always be imperfectly examined, and most frequently will not be so at all.

“XVIII. *Materials for Road Making.*—These, I need not say, are of primary importance. It is true that expence frequently prevents their being carried far, though sometimes a road may carry the materials for its own extension. But there is another point of view in which the collection of both good and bad materials for road-making may be important, when the subject comes to be

scientifically considered. I mean that of the *combinations* of the different materials to be found at hand, or made at a small expence;—thus, we know that throughout the great basaltic district of India the elements of the Puzzolanas are every where found. We know that durable roads have been constructed of volcanic materials. We know that minute proportions of ferruginous or calcareous matters have often extraordinary effects in consolidating earthy materials. But of what is available, or how it should be used, in any given part of the country, we are totally ignorant. It is evident that Indian road-making requires, if possible, more than the careful aggregation of materials to resist the torrents of the rains, and the heats of the dry weather. It is probable that it is yet a science to be *created* between the chemist and the engineer.*

“XIX. *Plastic Geology*.—*Clays and earths for pottery and other manufactures*.—Of these we have none in the collection, and none, particularly so described in the Museum. Our first requisites are series of the English and other European pottery-clays, and of those from China, if obtainable. The scouring and pigment earths, and fire clays, of all kinds, are also required. Very good fire clays are found in Burdwan, Rajmahl, and near Moorsshedabad. I have been able to contribute specimens of the earths used in the curious red varnish of the native sugar-pans, which is of extraordinary durability.

“Apart from the improvement of our domestic manufactures, it is quite possible that some of our Indian clays may well pay for exportation.

“XX. With respect to how all these desiderata may be best obtained, the Society should, it is evident, first make known its wants, both in Europe and in India, by printing detailed memoranda, and offering exchanges where these can be desirable. From Europe we may doubtless count greatly upon the liberality of the Hon’ble the Court of Directors, and that of the many old and tried friends to India who seek but to know how they can best serve her. Scientific Institutions, and such associations as the Royal Agricultural Society† will no doubt be ready to meet our wishes. As a matter of purely commercial interest also, we must not forget to address the Chambers of Commerce, and the principal commercial houses connected with India both in England, on the Continent, and in America. There are doubtless many gentlemen amongst these who only desire to find individuals or public bodies ready to receive their suggestions and contributions, and assist their inquiries.

“In India we shall doubtless find many mercantile men, and members of the Services, ready to move their friends at home, or in various parts of India, in our behalf. To Capt. TREMENHEERE’s suggestions of assistance from Officers and Assistants of the Revenue Surveys, I should add, that we may obtain much from the principal and subordinate Collectors of all ranks, the Civil Surgeons, Planters, &c. and I doubt not that it will be the pride of the Society to see justice done to their contributions.

* The recent introduction of Asphaltum as a material for roads and pavements will occur here as a case in point.

† I am not sure that this is the correct title of this body.

“ The foregoing report will I fear be thought too long, though I have endeavoured, by abstaining almost wholly from explanatory notes and quotations in support of some of the views advanced, to make it as brief as possible. It will not I hope be forgotten how vast are the questions to which almost every paragraph of it leads. I have adverted in it, more than once to the high importance of the proposed Museum, in common with all institutions of the kind, as affording a ready access to much of what the student and speculator could not otherwise hope to obtain a sight of. I would farther remark, for this cannot be too well borne in mind, that in India we require, of necessity, *much more* assistance than in Europe, to prosecute successfully researches of this kind. We require this from the vast unexplored fields on all sides, and because the labourers in them are so few, and so liable to be interrupted by illness or change of residence, that, unless the objects of research are within their immediate reach, the mere time occupied in collecting them involves a thousand chances of fatal interruptions. We require it, moreover, because it so seldom occurs in India that the talent, the time, and the pecuniary means, are all found together. Those who have the time and the talent, lack the means; and those who have amply the means and the knowledge, can rarely afford the time, unless at the sacrifice of their health, of which we all know more than one melancholy example. It is thus that so little has been done by the English in India in the way of researches of this kind, and that we have often, unjustly enough, borne the reproach of indifference or of ignorance. It is thus I would then respectfully urge, that we require far more assistance than in Europe, where, from the abundance of talent, means, disposable time, settled modes of life, great facilities of communication, and of reference; and almost perfect knowledge of every existing resource, the student or speculator has, so to say, a mere pastime, in comparison with the difficulties which beset him in India:—India! a field of research so vast, that no man can even guess the extent of it; and he would be a bold one who would venture to pronounce to what its investigation may not yet lead us.”

Calcutta,
ASIATIC SOCIETY'S ROOMS,
26th February, 1841.

I have the honor to be,
Sir,
Your obedient, humble Servant,
H. PIDDINGTON,
Actg. Curator As. Soc. Museum.

It was resolved—That a copy of this interesting document be forwarded to Mr. Secretary BUSHBY, for submission to the Right Honorable the Governor of Bengal.

The President noticed the presentation of the plan and section of the Ghaut about to be constructed to the memory of the late James PRINSEP, Esq. by R. H. RATTRAY, Esq.

Resolved—That Mr. RATTRAY be thanked for the same, and that it be hung up in the rooms of the Asiatic Society, as requested by that gentleman.

For the presentations and contributions, the thanks of the Society were accorded.

